EDS-205 Series

5-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector)
- IEEE802.3/802.3u/802.3x support
- Broadcast storm protection
- DIN-rail mounting ability
- -10 to 60°C operating temperature range

Certifications

Introduction

The EDS-205 Series supports IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDIX auto-sensing RJ45 ports. The EDS-205 Series is rated to operate at temperatures ranging from -10 to 60°C, and is rugged enough for any harsh industrial environment. The switches can be easily installed on a DIN rail as well as in distribution boxes. The DIN-rail mounting capability, wide operating temperature, and the IP30 housing with LED indicators make the plug-and-play EDS-205 switches reliable and easy to use.

Specifications

Ethernet Interface

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control
10/100BaseT(X) Ports (RJ45 connector)	Full/Half duplex mode Auto MDI/MDI-X connection Auto negotiation speed

Switch Properties

Processing Type	Store and Forward
MAC Table Size	1 K
Packet Buffer Size	512 kbits

Power Parameters

Input Voltage	24 VDC
Input Current	0.11 A @ 24 VDC
Operating Voltage	12 to 48 VDC
Connection	1 removable 3-contact terminal block(s)
Overload Current Protection	1.1 A @ 24 VDC
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Plastic
IP Rating	IP30
Dimensions	24.9 x 100 x 86.5 mm (0.98 x 3.94 x 3.41 in)
Weight	135 g (0.30 lb)
Installation	DIN-rail mounting

Environmental Limits

Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	EN 60950-1, UL 508
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-31

MTBF

Time	3,915,945 hrs
Standards	Telcordia (Bellcore), GB

Warranty

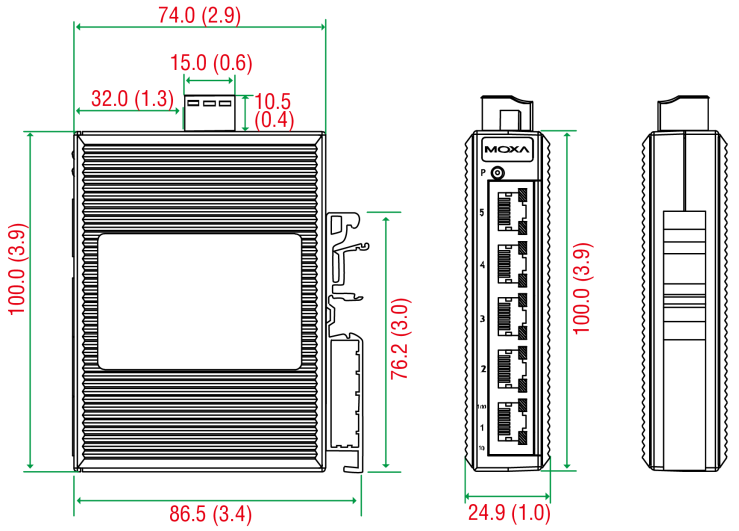
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-205 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View Front View Rear View

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	Housing Material	Operating Voltage	Operating Temp.
EDS-205	5	Plastic	12-48 VDC	-10 to 60°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-205A Series

5-port unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi/single-mode, SC or ST connector)
- Redundant dual 12/24/48 VDC power inputs
- IP30 aluminum housing
- Rugged hardware design well suited for hazardous locations (Class 1 Div. 2/ ATEX Zone 2), transportation (NEMA TS2/EN 50121-4/e-Mark), and maritime environments (DNV/GL/LR/ABS/NK)
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-205A Series 5-port industrial Ethernet switches support IEEE 802.3 and IEEE 802.3u/x with 10/100M full/half-duplex, MDI/MDI-X auto-sensing. The EDS-205A Series has 12/24/48 VDC (9.6 to 60 VDC) redundant power inputs that can be connected simultaneously to live DC power sources. These switches have been designed for harsh industrial environments, such as in maritime (DNV/GL/LR/ABS/NK), rail wayside, highway, or mobile applications (EN 50121-4/NEMA TS2/e-Mark), or hazardous locations (Class I Div. 2, ATEX Zone 2) that comply with FCC, UL, and CE standards.

The EDS-205A switches are available with a standard operating temperature range from -10 to 60°C, or with a wide operating temperature range from -40 to 75°C. All models are subjected to a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. In addition, the EDS-205A switches have DIP switches for enabling or disabling broadcast storm protection, providing another level of flexibility for industrial applications.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-205A/205A-T: 5 EDS-205A-M-SC/M-ST/S-SC Series: 4 All models support: Auto negotiation speed Full/half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-205A-M-SC Series: 1
100BaseFX Ports (multi-mode ST connector)	EDS-205A-M-ST Series: 1
100BaseFX Ports (single-mode SC connector)	EDS-205A-S-SC Series: 1

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Switch Properties

MAC Table Size	1 K
Packet Buffer Size	384 kbits
Processing Type	Store and Forward

Power Parameters

Connection	1 removable 4-contact terminal block(s)
Input Current	EDS-205A/205A-T: 0.09 A @ 24 VDC EDS-205A-M-SC/M-ST/S-SC Series: 0.1 A @ 24 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

DIP Switch Configuration

Ethernet Interface	Broadcast storm protection

Physical Characteristics

Housing	Aluminum
IP Rating	IP30
Dimensions	30 x 115 x 70 mm (1.18 x 4.52 x 2.76 in)
Weight	175 g (0.39 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	IECEx, ATEX, Class I Division 2
Maritime	ABS, DNV-GL, LR, NK
Railway	EN 50121-4
Safety	UL 508
Shock	IEC 60068-2-27
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-31

MTBF

Time	3,040,784 hrs
Standards	Telcordia (Bellcore), GB

Warranty

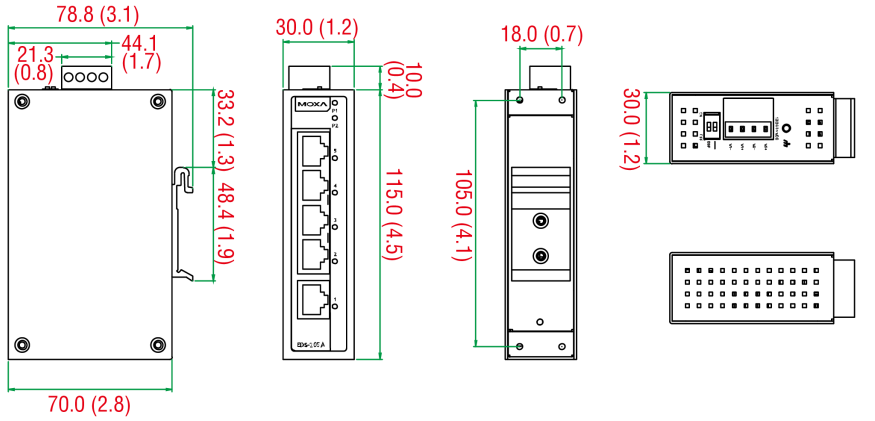
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-205A Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | Top and Bottom Views

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-205A	5	–	–	–	-10 to 60°C
EDS-205A-T	5	–	–	–	-40 to 75°C
EDS-205A-M-SC	4	1	–	–	-10 to 60°C
EDS-205A-M-SC-T	4	1	–	–	-40 to 75°C
EDS-205A-M-ST	4	–	1	–	-10 to 60°C
EDS-205A-M-ST-T	4	–	1	–	-40 to 75°C
EDS-205A-S-SC	4	–	–	1	-10 to 60°C
EDS-205A-S-SC-T	4	–	–	1	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-30	Wall-mounting kit, 2 plates, 4 screws, 40 x 30 x 1 mm
WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-208 Series

8-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi-mode, SC/ST connectors)
- IEEE802.3/802.3u/802.3x support
- Broadcast storm protection
- DIN-rail mounting ability
- -10 to 60°C operating temperature range

Certifications

Introduction

The EDS-208 Series supports IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDIX auto-sensing RJ45 ports. The EDS-208 Series is rated to operate at temperatures ranging from -10 to 60°C, and is rugged enough for any harsh industrial environment. The switches can be easily installed on a DIN rail as well as in distribution boxes. The DIN-rail mounting capability, wide operating temperature capability, and the IP30 housing with LED indicators make the plug-and-play EDS-208 switches easy to use and reliable.

Specifications

Ethernet Interface

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control
10/100BaseT(X) Ports (RJ45 connector)	Auto MDI/MDI-X connection Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-208-M-SC: Supported
100BaseFX Ports (multi-mode ST connector)	EDS-208-M-ST: Supported

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm	G.652
			800 MHz x km	
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Switch Properties

Processing Type	Store and Forward
MAC Table Size	2 K
Packet Buffer Size	768 kbits

Power Parameters

Input Voltage	24 VDC
Input Current	EDS-208: 0.07 A @ 24 VDC EDS-208-M Series: 0.1 A @ 24 VDC
Operating Voltage	12 to 48 VDC
Connection	1 removable 3-contact terminal block(s)
Overload Current Protection	2.5 A @ 24 VDC
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Plastic
IP Rating	IP30
Dimensions	40 x 100 x 86.5 mm (1.57 x 3.94 x 3.41 in)
Weight	170 g (0.38 lb)
Installation	DIN-rail mounting

Environmental Limits

Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 508
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV

	IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-31

MTBF

Time	EDS-208: 401,624 hrs EDS-208-M Series: 368,353 hrs
Standards	Telcordia (Bellcore), GB

Warranty

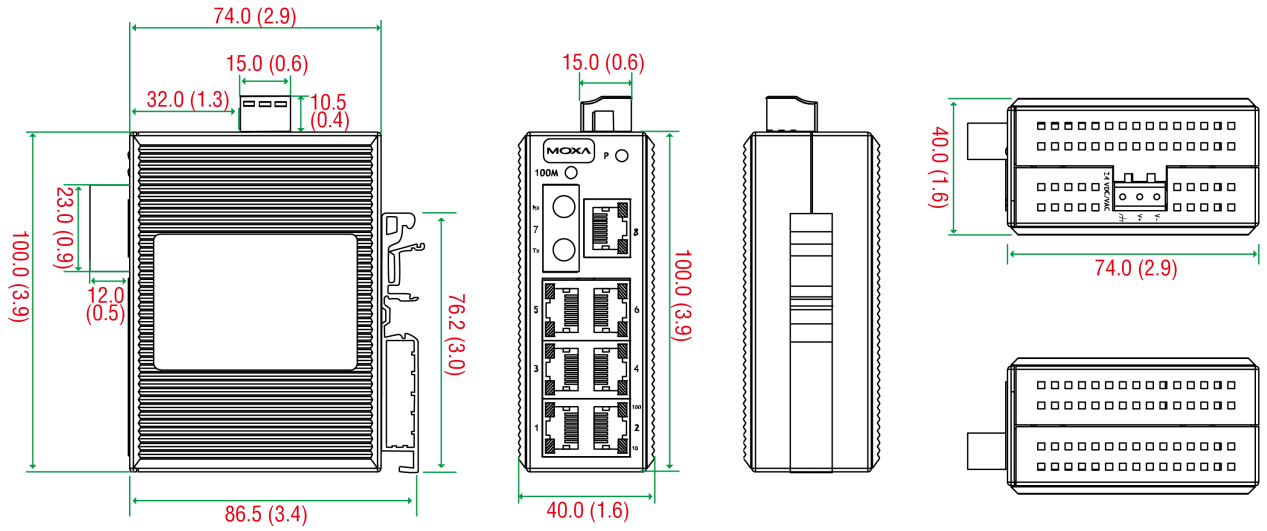
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-208 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | Top and Bottom Views

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode ST Connector	100BaseFX Ports Multi-Mode SC Connector	Housing Material	Operating Voltage	Operating Temp.
EDS-208	8	–	–	Plastic	12-45 VDC	-10 to 60°C
EDS-208-M-ST	7	1	–	Plastic	12-45 VDC	-10 to 60°C
EDS-208-M-SC	7	–	1	Plastic	12-45 VDC	-10 to 60°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-208A Series

8-port unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi/single-mode, SC or ST connector)
- Redundant dual 12/24/48 VDC power inputs
- IP30 aluminum housing
- Rugged hardware design well suited for hazardous locations (Class 1 Div. 2/ ATEX Zone 2), transportation (NEMA TS2/EN 50121-4/e-Mark), and maritime environments (DNV/GL/LR/ABS/NK)
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-208A Series 8-port industrial Ethernet switches support IEEE 802.3 and IEEE 802.3u/x with 10/100M full/half-duplex, MDI/MDI-X auto-sensing. The EDS-208A Series has 12/24/48 VDC (9.6 to 60 VDC) redundant power inputs that can be connected simultaneously to live DC power sources. These switches have been designed for harsh industrial environments, such as in maritime (DNV/GL/LR/ABS/NK), rail wayside, highway, or mobile applications (EN 50121-4/NEMA TS2/e-Mark), or hazardous locations (Class I Div. 2, ATEX Zone 2) that comply with FCC, UL, and CE standards.

The EDS-208A switches are available with a standard operating temperature range from -10 to 60°C, or with a wide operating temperature range from -40 to 75°C. All models are subjected to a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. In addition, the EDS-208A switches have DIP switches for enabling or disabling broadcast storm protection, providing another level of flexibility for industrial applications.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-208A/208A-T: 8 EDS-208A-M-SC/M-ST/S-SC Series: 7 EDS-208A-MM-SC/MM-ST/SS-SC Series: 6 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-208A-M-SC Series: 1 EDS-208A-MM-SC Series: 2
100BaseFX Ports (multi-mode ST connector)	EDS-208A-M-ST Series: 1 EDS-208A-MM-ST Series: 2
100BaseFX Ports (single-mode SC connector)	EDS-208A-S-SC Series: 1 EDS-208A-SS-SC Series: 2

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Switch Properties

MAC Table Size	2 K
Packet Buffer Size	768 kbits
Processing Type	Store and Forward

Power Parameters

Connection	1 removable 4-contact terminal block(s)
Input Current	EDS-208A/208A-T, EDS-208A-M-SC/M-ST/S-SC Series: 0.11 A @ 24 VDC EDS-208A-MM-SC/MM-ST/SS-SC Series: 0.15 A @ 24 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

DIP Switch Configuration

Ethernet Interface	Broadcast storm protection

Physical Characteristics

Housing	Aluminum
IP Rating	IP30
Dimensions	50 x 114 x 70 mm (1.96 x 4.49 x 2.76 in)
Weight	275 g (0.61 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX, Class I Division 2
Maritime	ABS, DNV-GL, LR, NK
Railway	EN 50121-4
Safety	UL 508
Shock	IEC 60068-2-27
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-31

MTBF

Time	2,701,531 hrs
Standards	Telcordia (Bellcore), GB

Warranty

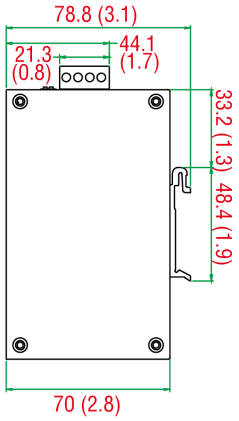
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

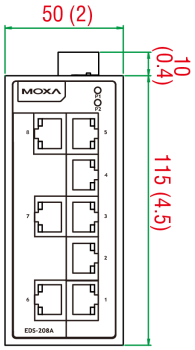
Device	1 x EDS-208A Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

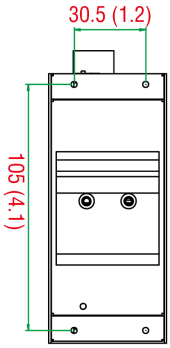
Unit: mm (inch)



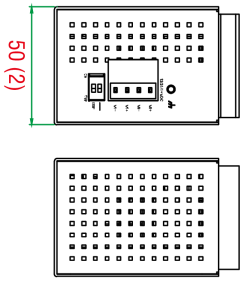
Side View



Front View



Rear View



Top and Bottom Views

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-208A	8	–	–	–	-10 to 60°C
EDS-208A-T	8	–	–	–	-40 to 75°C
EDS-208A-M-SC	7	1	–	–	-10 to 60°C
EDS-208A-M-SC-T	7	1	–	–	-40 to 75°C
EDS-208A-M-ST	7	–	1	–	-10 to 60°C
EDS-208A-M-ST-T	7	–	1	–	-40 to 75°C
EDS-208A-MM-SC	6	2	–	–	-10 to 60°C
EDS-208A-MM-SC-T	6	2	–	–	-40 to 75°C
EDS-208A-MM-ST	6	–	2	–	-10 to 60°C
EDS-208A-MM-ST-T	6	–	2	–	-40 to 75°C
EDS-208A-S-SC	7	–	–	1	-10 to 60°C
EDS-208A-S-SC-T	7	–	–	1	-40 to 75°C
EDS-208A-SS-SC	6	–	–	2	-10 to 60°C
EDS-208A-SS-SC-T	6	–	–	2	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-30	Wall-mounting kit, 2 plates, 4 screws, 40 x 30 x 1 mm
WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-305 Series

5-port unmanaged Ethernet switches

Features and Benefits

- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-305 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 5-port switches come with a built-in relay warning function that alerts network engineers when power failures or port breaks occur. In addition, the switches are designed for harsh industrial environments, such as the hazardous locations defined by the Class 1 Div. 2 and ATEX Zone 2 standards.

The switches comply with FCC, UL, and CE standards and support either a standard operating temperature range of 0 to 60°C or a wide operating temperature range of -40 to 75°C. All switches in the series undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-305 switches can be installed easily on a DIN rail or in a distribution box.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	EDS-305/305-T: 5 EDS-305-M-SC/M-ST/S-SC Series, EDS-305-S-SC-80: 4 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-305-M-SC Series: 1
100BaseFX Ports (multi-mode ST connector)	EDS-305-M-ST Series: 1
100BaseFX Ports (single-mode SC connector)	EDS-305-S-SC: 1 EDS-305-S-SC-T: 1
100BaseFX Ports (single-mode SC connector, 80 km)	EDS-305-S-SC-80: 1

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Optical Fiber

		100BaseFX			
		Multi-Mode		Single-Mode (40 km)	Single-Mode (80 km)
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652	G.652
Typical Distance		4 km	5 km	40 km	80 km
Wavelen-gth	Typical (nm)	1300		1310	1550
	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

DIP Switch Configuration

Ethernet Interface	Port break alarm

Switch Properties

MAC Table Size	1 K
Packet Buffer Size	384 K
Processing Type	Store and Forward

Power Parameters

Input Current	EDS-305/305-T: 0.11 A @ 24 VDC EDS-305-M/S Series: 0.15 A @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	12 to 48 VDC
Input Voltage	24 VDC, Redundant dual inputs
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)

Weight	790 g (1.75 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Hazardous Locations	ATEX, Class I Division 2
EMI	CISPR 32, FCC Part 15B Class A
Maritime	DNV-GL
EMC	EN 55032/24
Vibration	IEC 60068-2-6
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Safety	UL 508, UL 60950-1, CSA C22.2 No. 60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	422,742 hrs
Standards	MIL-HDBK-217F

Warranty

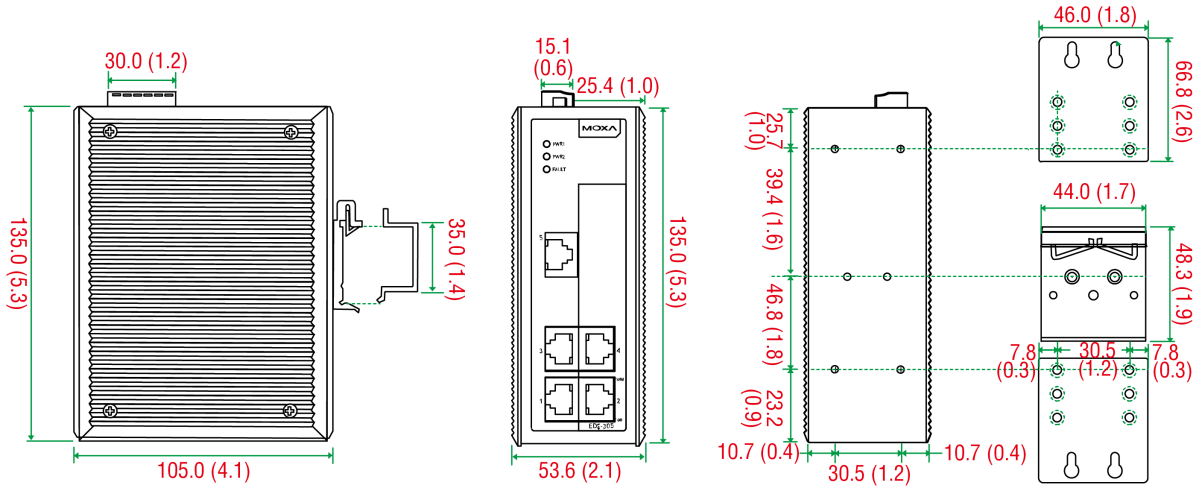
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-305 Series switch
Installation Kit	2 x cap, plastic, for RJ45 port 1 x cap, plastic, for SC fiber port (-SC models) 1 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-305	5	–	–	–	0 to 60°C
EDS-305-T	5	–	–	–	-40 to 75°C
EDS-305-M-SC	4	1	–	–	0 to 60°C
EDS-305-M-SC-T	4	1	–	–	-40 to 75°C
EDS-305-M-ST	4	–	1	–	0 to 60°C
EDS-305-M-ST-T	4	–	1	–	-40 to 75°C
EDS-305-S-SC	4	–	–	1	0 to 60°C
EDS-305-S-SC-80	4	–	–	1	0 to 60°C
EDS-305-S-SC-T	4	–	–	1	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-308 Series

8-port unmanaged Ethernet switches

Features and Benefits

- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-308 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 8-port switches come with a built-in relay warning function that alerts network engineers when power failures or port breaks occur. In addition, the switches are designed for harsh industrial environments, such as the hazardous locations defined by the Class 1 Div. 2 and ATEX Zone 2 standards.

The switches comply with FCC, UL, and CE standards and support either a standard operating temperature range of -10 to 60°C or a wide operating temperature range of -40 to 75°C. All switches in the series undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-308 switches can be installed easily on a DIN rail or in a distribution box.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	EDS-308/308-T: 8 EDS-308-M-SC/308-M-SC-T/308-S-SC/308-S-SC-T/308-S-SC-80: 7 EDS-308-MM-SC/308-MM-SC-T/308-MM-ST/308-MM-ST-T/308-SS-SC/308-SS-SC-T/308-SS-SC-80: 6 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-308-M-SC: 1 EDS-308-M-SC-T: 1 EDS-308-MM-SC: 2 EDS-308-MM-SC-T: 2
100BaseFX Ports (multi-mode ST connector)	EDS-308-MM-ST: 2 EDS-308-MM-ST-T: 2
100BaseFX Ports (single-mode SC connector)	EDS-308-S-SC: 1 EDS-308-S-SC-T: 1 EDS-308-SS-SC: 2 EDS-308-SS-SC-T: 2
100BaseFX Ports (single-mode SC connector, 80 km)	EDS-308-S-SC-80: 1 EDS-308-SS-SC-80: 2

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Optical Fiber

		100BaseFX			
		Multi-Mode		Single-Mode (40 km)	Single-Mode (80 km)
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652	G.652
Typical Distance		4 km	5 km	40 km	80 km
Wave-length	Typical (nm)	1300		1310	1550
	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

DIP Switch Configuration

Ethernet Interface	Port break alarm

Switch Properties

MAC Table Size	2 kbits
Packet Buffer Size	768 K
Processing Type	Store and Forward

Power Parameters

Input Current	EDS-308/308-T: 0.07 A @ 24 VDC EDS-308-M-SC/S-SC Series, 308-S-SC-80: 0.12 A @ 24 VDC EDS-308-MM-SC/MM-ST/SS-SC Series, 308-SS-SC-80: 0.15 A @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	9.6 to 60 VDC
Input Voltage	Redundant dual inputs, 12/24/48 VDC
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)

Weight	790 g (1.75 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Hazardous Locations	ATEX, Class I Division 2
EMI	CISPR 32, FCC Part 15B Class A
EMC	EN 55032/24
Vibration	IEC 60068-2-6
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	UL 508, UL 60950-1, CSA C22.2 No. 60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	255,528 hrs
Standards	MIL-HDBK-217F

Warranty

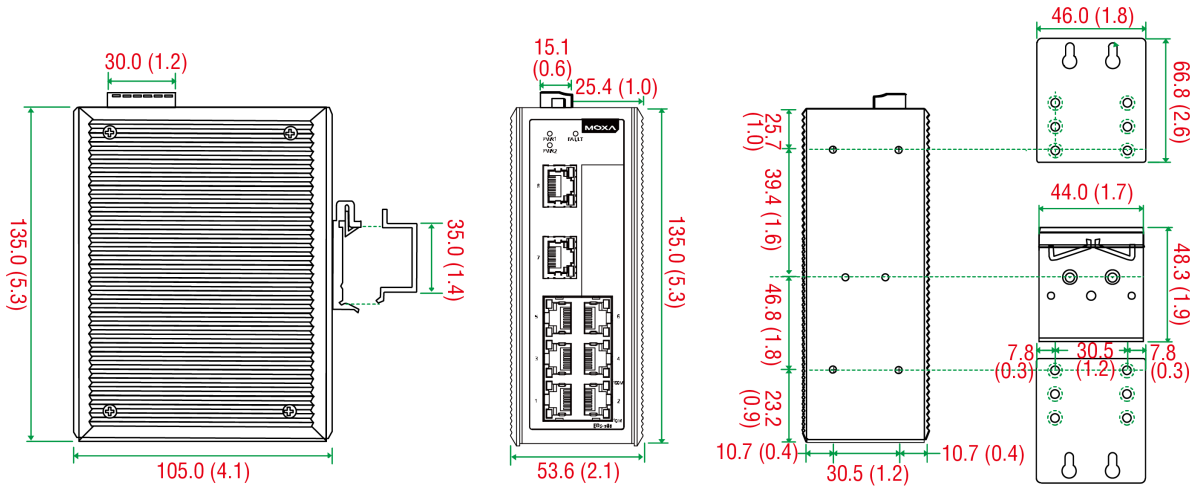
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-308 Series switch
Installation Kit	1 x cap, plastic, for SC fiber port 2 x cap, plastic, for SC fiber port (-SC models) 2 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-308	8	–	–	–	-10 to 60°C
EDS-308-T	8	–	–	–	-40 to 75°C
EDS-308-M-SC	7	1	–	–	-10 to 60°C
EDS-308-M-SC-T	7	1	–	–	-40 to 75°C
EDS-308-MM-SC	6	2	–	–	-10 to 60°C
EDS-308-MM-SC-T	6	2	–	–	-40 to 75°C
EDS-308-MM-ST	6	–	2	–	-10 to 60°C
EDS-308-MM-ST-T	6	–	2	–	-40 to 75°C
EDS-308-S-SC	7	–	–	1	-10 to 60°C
EDS-308-S-SC-T	7	–	–	1	-40 to 75°C
EDS-308-SS-SC	6	–	–	2	-10 to 60°C
EDS-308-SS-SC-T	6	–	–	2	-40 to 75°C
EDS-308-S-SC-80	7	–	–	1	-10 to 60°C
EDS-308-SS-SC-80	6	–	–	2	-10 to 60°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature

MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-309 Series

9-port unmanaged Ethernet switches

Features and Benefits

- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-309 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 9-port switches come with a built-in relay warning function that alerts network engineers when power failures or port breaks occur. In addition, the switches are designed for harsh industrial environments, such as the hazardous locations defined by the Class 1 Div. 2 and ATEX Zone 2 standards.

The switches comply with FCC, UL, and CE standards and support either a standard operating temperature range of -10 to 60°C or a wide operating temperature range of -40 to 75°C. All switches in the series undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-309 switches can be installed easily on a DIN rail or in a distribution box.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	6 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-309-3M-SC Series: 3
100BaseFX Ports (multi-mode ST connector)	EDS-309-3M-ST Series: 3
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control
Switch Properties	
MAC Table Size	1 K
Packet Buffer Size	512 kbits
Processing Type	Store and Forward
DIP Switch Configuration	
Ethernet Interface	Port break alarm

Power Parameters

Input Current	0.26 A @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	9.6 to 60 VDC
Input Voltage	Redundant dual inputs, 12/24/48 VDC
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight	790 g (1.75 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Hazardous Locations	ATEX, Class I Division 2
EMI	CISPR 32, FCC Part 15B Class A
EMC	EN 55032/24
Vibration	IEC 60068-2-6
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	UL 508, UL 60950-1, CSA C22.2 No. 60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	396,595 hrs
Standards	MIL-HDBK-217F

Warranty

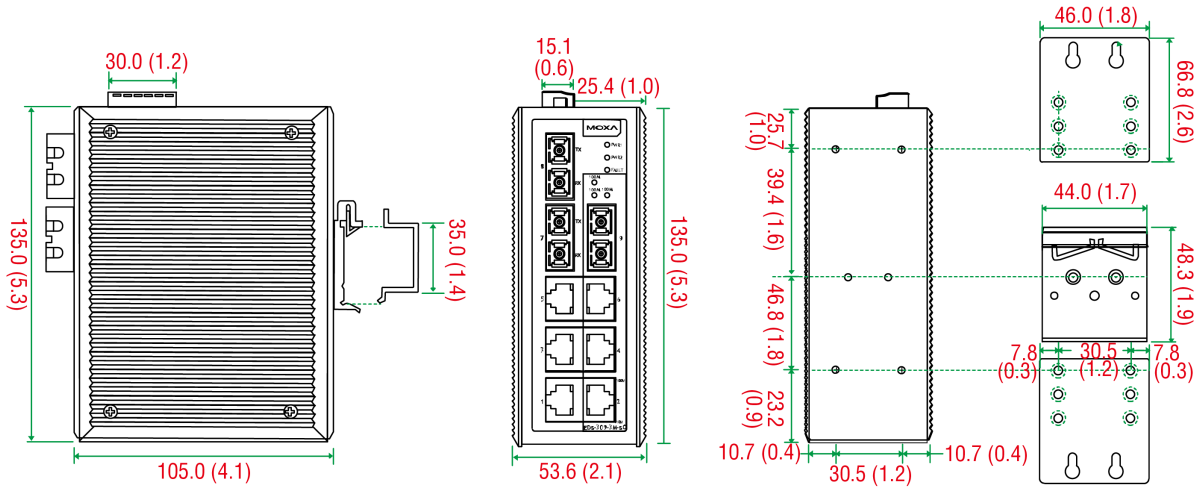
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-309 Series switch
Installation Kit	4 x cap, plastic, for RJ45 port 3 x cap, plastic, for SC fiber port (-SC models) 3 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	Operating Temp.
EDS-309-3M-SC	6	3	–	-10 to 60°C
EDS-309-3M-SC-T	6	3	–	-40 to 75°C
EDS-309-3M-ST	6	–	3	-10 to 60°C
EDS-309-3M-ST-T	6	–	3	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-316 Series

16-port unmanaged Ethernet switches

Features and Benefits

- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-316 Ethernet switches provide an economical solution for your industrial Ethernet connections. These 16-port switches come with a built-in relay warning function that alerts network engineers when power failures or port breaks occur. In addition, the switches are designed for harsh industrial environments, such as the hazardous locations defined by the Class 1 Div. 2 and ATEX Zone 2 standards.

The switches comply with FCC, UL, and CE standards and support either a standard operating temperature range of -10 to 60°C or a wide operating temperature range of -40 to 75°C. All switches in the series undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-316 switches can be installed easily on a DIN rail or in a distribution box.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	EDS-316 Series: 16 EDS-316-MM-SC/MM-ST/MS-SC/SS-SC Series, EDS-316-SS-SC-80: 14 EDS-316-M-SC/M-ST/S-SC Series: 15 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-316-M-SC: 1 EDS-316-M-SC-T: 1 EDS-316-MM-SC: 2 EDS-316-MM-SC-T: 2 EDS-316-MS-SC: 1
100BaseFX Ports (multi-mode ST connector)	EDS-316-M-ST Series: 1 EDS-316-MM-ST Series: 2
100BaseFX Ports (single-mode SC connector)	EDS-316-MS-SC, EDS-316-S-SC Series: 1 EDS-316-SS-SC Series: 2
100BaseFX Ports (single-mode SC connector, 80 km)	EDS-316-SS-SC-80: 2

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Optical Fiber

		100BaseFX			
		Multi-Mode		Single-Mode (40 km)	Single-Mode (80 km)
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652	G.652
Typical Distance		4 km	5 km	40 km	80 km
Wavelen-gth	Typical (nm)	1300		1310	1550
	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

DIP Switch Configuration

Ethernet Interface	Port break alarm

Switch Properties

Packet Buffer Size	1.25 Mbits
MAC Table Size	4 K
Processing Type	Store and Forward

Power Parameters

Input Current	Non-fiber models: 0.34 A @ 24 VDC Fiber models: 0.4 A @ 24 VDC
Connection	1 removable 6-contact terminal block(s)
Operating Voltage	9.6 to 60 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	80.1 x 135 x 105 mm (3.15 x 5.31 x 4.13 in)

Weight	1140 g (2.52 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Hazardous Locations	ATEX, Class I Division 2
EMI	CISPR 32, FCC Part 15B Class A
Maritime	DNV-GL
EMC	EN 55032/24
Vibration	IEC 60068-2-6
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	UL 508, UL 60950-1, CSA C22.2 No. 60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	257,516 hrs
Standards	MIL-HDBK-217F

Warranty

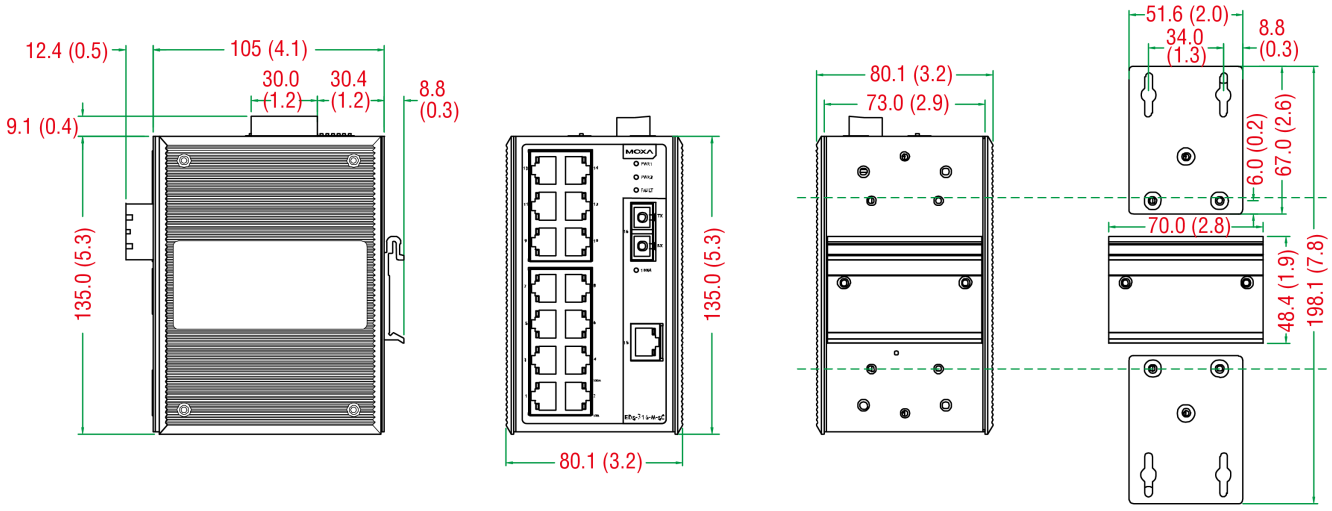
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-316 Series switch
Installation Kit	4 x cap, plastic, for RJ45 port 1 x cap, plastic, for SC fiber port (-M-SC/S-SC models) 2 x cap, plastic, for SC fiber port (-MS-SC/MM-SC models) 1 x cap, plastic, for ST fiber port (-M-ST models) 2 x cap, plastic, for ST fiber port (-MM-ST models)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-316	16	–	–	–	-10 to 60°C
EDS-316-T	16	–	–	–	-40 to 75°C
EDS-316-M-SC	15	1	–	–	-10 to 60°C
EDS-316-M-SC-T	15	1	–	–	-40 to 75°C
EDS-316-M-ST	15	–	1	–	-10 to 60°C
EDS-316-M-ST-T	15	–	1	–	-40 to 75°C
EDS-316-MM-SC	15	2	–	–	-10 to 60°C
EDS-316-MM-SC-T	14	2	–	–	-40 to 75°C
EDS-316-MM-ST	14	–	2	–	-10 to 60°C
EDS-316-MM-ST-T	14	–	2	–	-40 to 75°C
EDS-316-MS-SC	15	1	–	1	-10 to 60°C
EDS-316-S-SC	15	–	–	1	-10 to 60°C
EDS-316-S-SC-T	15	–	–	1	-40 to 75°C
EDS-316-SS-SC	14	–	–	2	-10 to 60°C
EDS-316-SS-SC-80	14	–	–	2	-10 to 60°C
EDS-316-SS-SC-T	14	–	–	2	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature

DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2005-EL Series

5-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector)
- Compact size for easy installation
- QoS supported to process critical data in heavy traffic
- IP40-rated metal housing
- -40 to 75°C wide operating temperature range (-T models)

Certifications

Introduction

The EDS-2005-EL series of industrial Ethernet switches have five 10/100M copper ports, which are ideal for applications that require simple industrial Ethernet connections. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2005-EL Series also allows users to enable or disable the Quality of Service (QoS) function, and broadcast storm protection (BSP) with DIP switches on the outer panel. In addition, the EDS-2005-EL Series has a rugged metal housing to ensure suitability for use in industrial environments.

The EDS-2005-EL Series has a 12/24/48 VDC single power input, DIN-rail mounting, and high-level EMI/EMC capabilities. In addition to its compact size, the EDS-2005-EL Series has passed a 100% burn-in test to ensure it will function reliably after it has been deployed. The EDS-2005-EL Series has a standard operating temperature range of -10 to 60°C with wide-temperature (-40 to 75°C) models also available.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	5 Full/Half duplex mode Auto MDI/MDI-X connection Auto negotiation speed
Standards	IEEE 802.3 for 10BaseT IEEE 802.1p for Class of Service IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control
Switch Properties	
Processing Type	Store and Forward
MAC Table Size	8 K
Packet Buffer Size	4 Mbits
DIP Switch Configuration	
Ethernet Interface	Quality of Service (QoS), Broadcast Storm Protection (BSP)
Power Parameters	
Connection	1 removable 2-contact terminal block(s)
Input Current	0.045 A @ 24 VDC

Input Voltage	12/24/48 VDC
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Dimensions	18 x 81 x 65 mm (0.7 x 3.19 x 2.56 in)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Weight	105 g (0.23 lb)
Housing	Metal

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	EDS-2005-EL: -10 to 60°C (14 to 140°F) EDS-2005-EL-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1 (LVD)
EMC	EN 55032/35
EMI	CISPR 22, 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-32

MTBF

Time	4,814,369 hrs
Standards	Telcordia (Bellcore), GB

Warranty

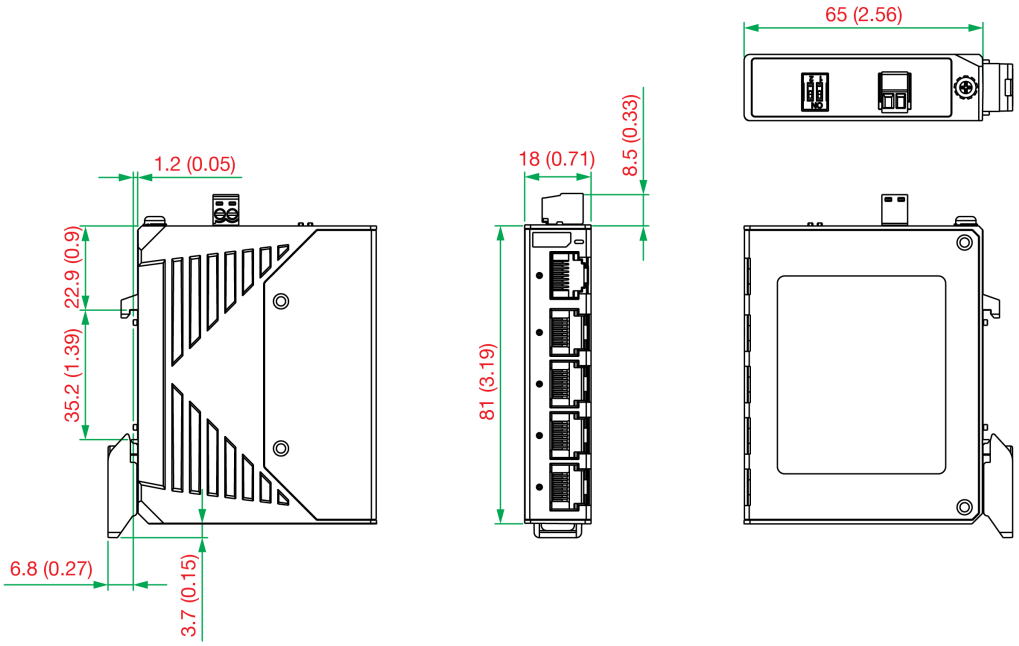
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-2005 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	Operating Temperature
EDS-2005-EL	5	-10 to 60°C
EDS-2005-EL-T	5	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-18	Wall-mounting kit, 1 plate, 18 x 120 x 8.5 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2005-ELP Series

5-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector)
- Compact size for easy installation
- QoS supported to process critical data in heavy traffic
- IP40-rated plastic housing

Certifications

Introduction

The EDS-2005-ELP series of industrial Ethernet switches have five 10/100M copper ports and a plastic housing, which are ideal for applications that require simple industrial Ethernet connections. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2005-ELP Series also allows users to enable or disable the Quality of Service (QoS) function, and broadcast storm protection (BSP) with DIP switches on the outer panel.

The EDS-2005-ELP Series has a 12/24/48 VDC single power input, DIN-rail mounting, and high-level EMI/EMC capabilities. In addition to its compact size, the EDS-2005-ELP Series has passed a 100% burn-in test to ensure it will function reliably after it has been deployed. The EDS-2005-EL Series has a standard operating temperature range of -10 to 60°C.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	5 Full/Half duplex mode Auto MDI/MDI-X connection Auto negotiation speed
Standards	IEEE 802.3 for 10BaseT IEEE 802.1p for Class of Service IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control
Switch Properties	
Processing Type	Store and Forward
MAC Table Size	8 K
Packet Buffer Size	4 Mbits
DIP Switch Configuration	
Ethernet Interface	Quality of Service (QoS), Broadcast Storm Protection (BSP)
Power Parameters	
Connection	1 removable 3-contact terminal block(s)
Input Current	0.045 A @ 24 VDC

Input Voltage	12/24/48 VDC
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Dimensions	19 x 81 x 65 mm (0.74 x 3.19 x 2.56 in)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Weight	56 g (0.12 lb)
Housing	Plastic

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1 (LVD)
EMC	EN 55032/35
EMI	CISPR 22, 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-32

MTBF

Time	4,814,369 hrs
Standards	Telcordia (Bellcore), GB

Warranty

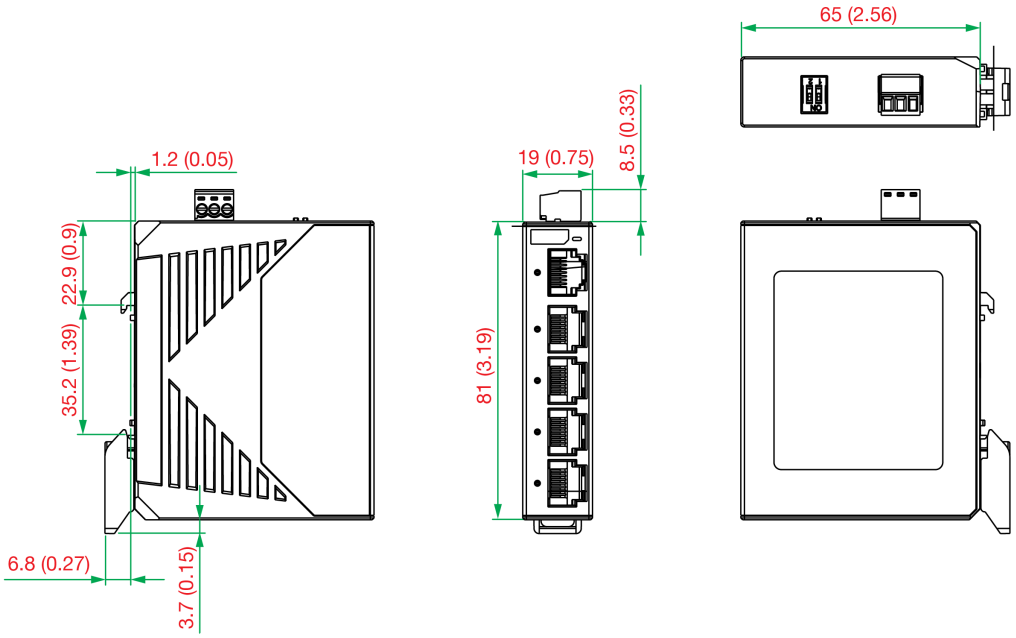
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-2005 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	Housing	Operating Temperature
EDS-2005-ELP	5	Plastic	-10 to 60°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-48	75W/1.6A DIN-rail 48 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-18	Wall-mounting kit, 1 plate, 18 x 120 x 8.5 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2008-EL Series

8-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector)
- Compact size for easy installation
- QoS supported to process critical data in heavy traffic
- IP40-rated metal housing
- -40 to 75°C wide operating temperature range (-T models)

Certifications

Introduction

The EDS-2008-EL series of industrial Ethernet switches have up to eight 10/100M copper ports, which are ideal for applications that require simple industrial Ethernet connections. To provide greater versatility for use with applications from different industries, the EDS-2008-EL Series also allows users to enable or disable the Quality of Service (QoS) function, and broadcast storm protection (BSP) with DIP switches on the outer panel. In addition, the EDS-2008-EL Series has a rugged metal housing to ensure suitability for use in industrial environments and fiber connections (Multi-mode SC or ST) can also be selected.

The EDS-2008-EL Series has a 12/24/48 VDC single power input, DIN-rail mounting, and high-level EMI/EMC capability. In addition to its compact size, the EDS-2008-EL Series has passed a 100% burn-in test to ensure it will function reliably after it has been deployed. The EDS-2008-EL Series has a standard operating temperature range of -10 to 60°C with wide-temperature (-40 to 75°C) models also available.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-2008-EL: 8 EDS-2008-EL-M-ST: 7 EDS-2008-EL-M-SC: 7 Full/Half duplex mode Auto MDI/MDI-X connection Auto negotiation speed
100BaseFX Ports (multi-mode SC connector)	EDS-2008-EL-M-SC: 1
100BaseFX Ports (multi-mode ST connector)	EDS-2008-EL-M-ST: 1
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.1p for Class of Service

Switch Properties

Processing Type	Store and Forward
MAC Table Size	8 K
Packet Buffer Size	4 Mbits

DIP Switch Configuration

Ethernet Interface	Quality of Service (QoS), Broadcast Storm Protection (BSP)

Power Parameters

Connection	1 removable 2-contact terminal block(s)
Input Current	EDS-2008-EL: 0.067A @ 24 VDC EDS-2008-EL-M-ST/EDS-2008-EL-M-SC: 0.105A @ 24 VDC
Input Voltage	12/24/48 VDC
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Installation	DIN-rail mounting, Wall mounting (with optional kit)
Weight	163 g (0.36 lb)
Housing	Metal
Dimensions	EDS-2008-EL: 36 x 81 x 65 mm (1.4 x 3.19 x 2.56 in) EDS-2008-EL-M-ST: 36 x 81 x 70.9 mm (1.4 x 3.19 x 2.79 in) EDS-2008-EL-M-SC: 36 x 81 x 67.9 mm (1.4 x 3.19 x 2.67 in)

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	EDS-2008-EL/EDS-2008-EL-M-SC/EDS-2008-EL-M-ST: -10 to 60°C (14 to 140°F) EDS-2008-EL-T/EDS-2008-EL-M-SC-T/EDS-2008-EL-M-ST-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1 (LVD)
EMC	EN 55032/35
EMI	CISPR 22, 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-32

MTBF

Time	3,472,660 hrs
Standards	Telcordia (Bellcore), GB

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

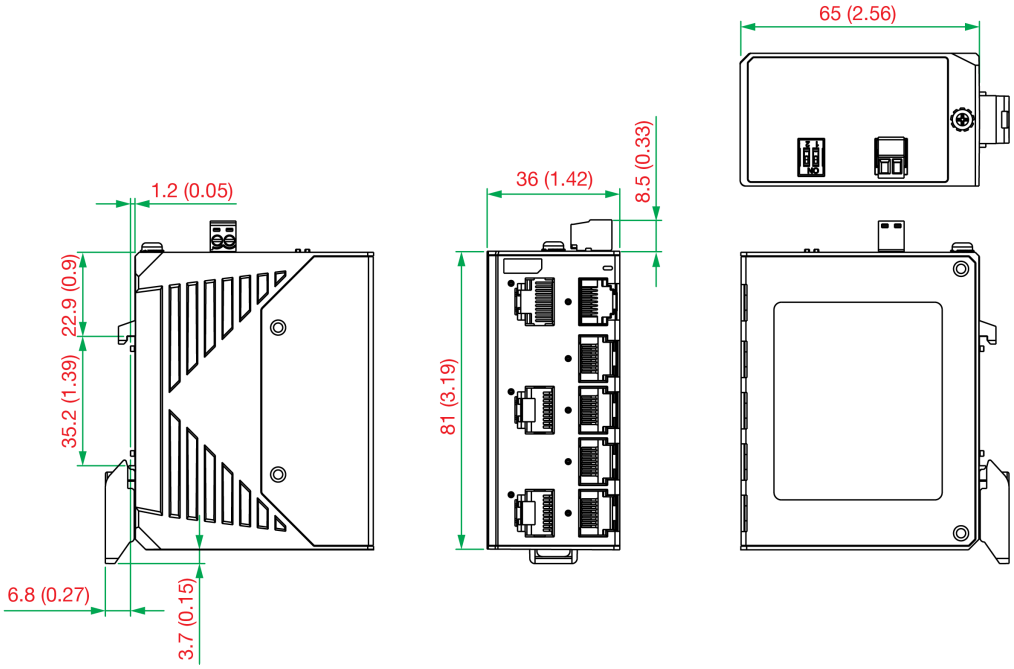
Package Contents

Device	1 x EDS-2008 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

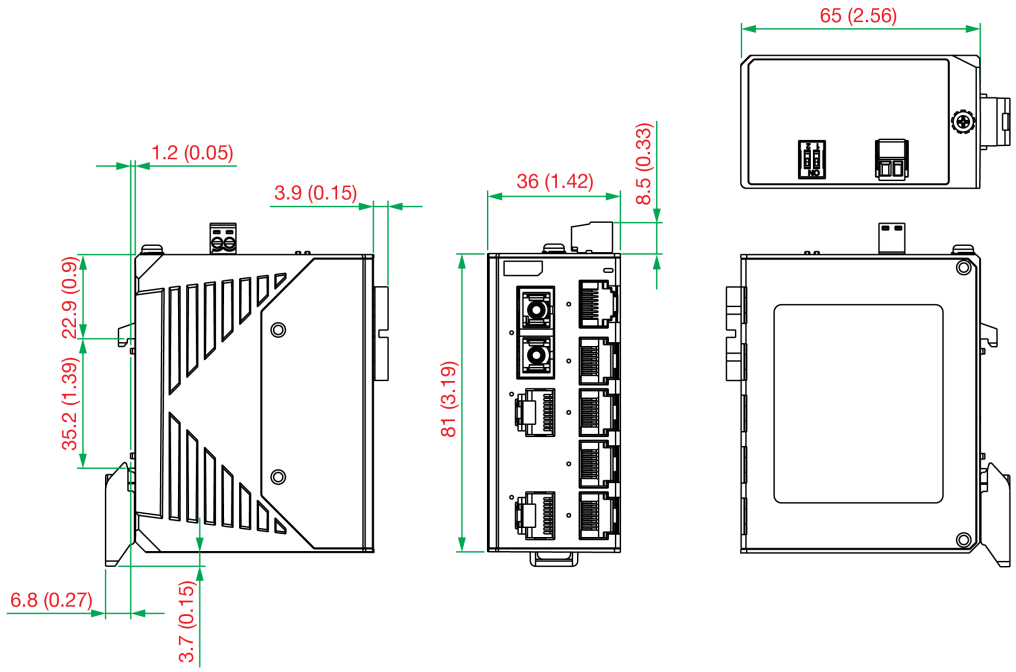
EDS-2008-EL

Unit: mm (inch)



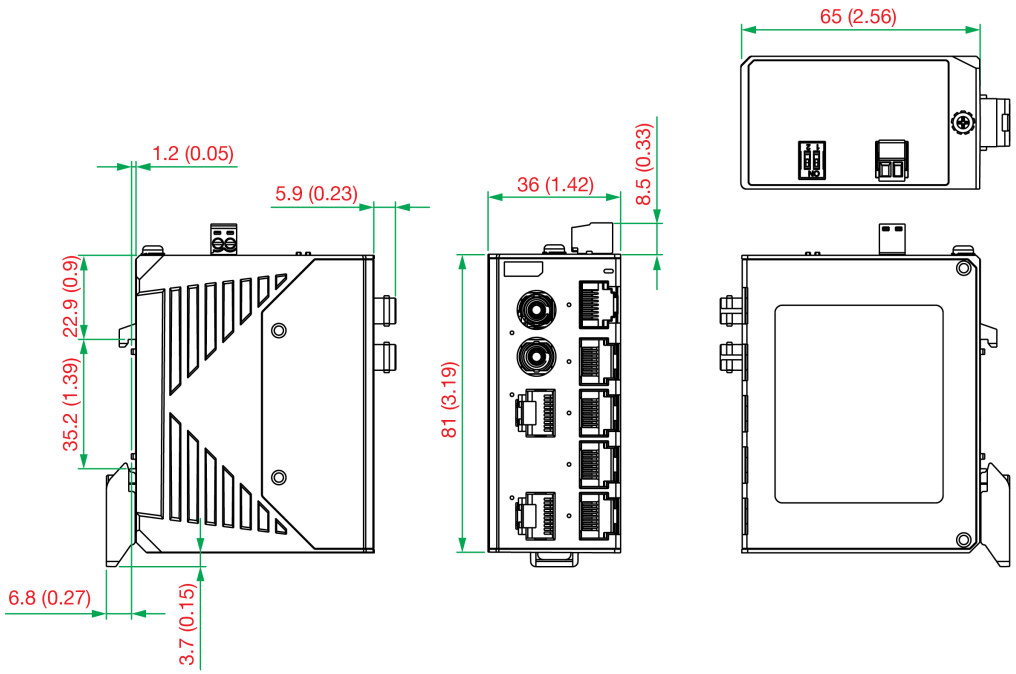
EDS-2008-EL-M-SC

Unit: mm (inch)



EDS-2008-EL-ST

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	10/100BaseFX Ports (Multi-mode SC)	10/100BaseFX Ports (Multi-mode ST)	Housing	Operating Temperature
EDS-2008-EL	8	-	-	Metal	-10 to 60°C
EDS-2008-EL-M-SC	7	1	-	Metal	-10 to 60°C
EDS-2008-EL-M-ST	7	-	1	Metal	-10 to 60°C
EDS-2008-EL-T	8	-	-	Metal	-40 to 75°C
EDS-2008-EL-M-SC-T	7	1	-	Metal	-40 to 75°C
EDS-2008-EL-M-ST-T	7	-	1	Metal	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-18	Wall-mounting kit, 1 plate, 18 x 120 x 8.5 mm

EDS-2008-ELP Series

8-port entry-level unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector)
- Compact size for easy installation
- QoS supported to process critical data in heavy traffic
- IP40-rated plastic housing

Certifications

Introduction

The EDS-2008-ELP series of industrial Ethernet switches have eight 10/100M copper ports and a plastic housing, which are ideal for applications that require simple industrial Ethernet connections. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2008-ELP Series also allows users to enable or disable the Quality of Service (QoS) function, and broadcast storm protection (BSP) with DIP switches on the outer panel..

The EDS-2008-ELP Series has a 12/24/48 VDC single power input, DIN-rail mounting, and high-level EMI/EMC capabilities. In addition to its compact size, the EDS-2008-ELP Series has passed a 100% burn-in test to ensure it will function reliably after it has been deployed. The EDS-2008-ELP Series has a standard operating temperature range of -10 to 60°C.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	8 Full/Half duplex mode Auto MDI/MDI-X connection Auto negotiation speed
Standards	IEEE 802.3 for 10BaseT IEEE 802.1p for Class of Service IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control

Switch Properties	
Processing Type	Store and Forward
MAC Table Size	8 K
Packet Buffer Size	4 Mbits

DIP Switch Configuration	
Ethernet Interface	Quality of Service (QoS), Broadcast Storm Protection (BSP)

Power Parameters	
Connection	1 removable 3-contact terminal block(s)
Input Current	0.067 A @ 24 VDC

Input Voltage	12/24/48 VDC
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Dimensions	36 x 81 x 65 mm (1.4 x 3.19 x 2.56 in)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Housing	Plastic
Weight	90 g (0.2 lb)

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1 (LVD)
EMC	EN 55032/35
EMI	CISPR 22, 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-32

MTBF

Time	3,472,660 hrs
Standards	Telcordia (Bellcore), GB

Warranty

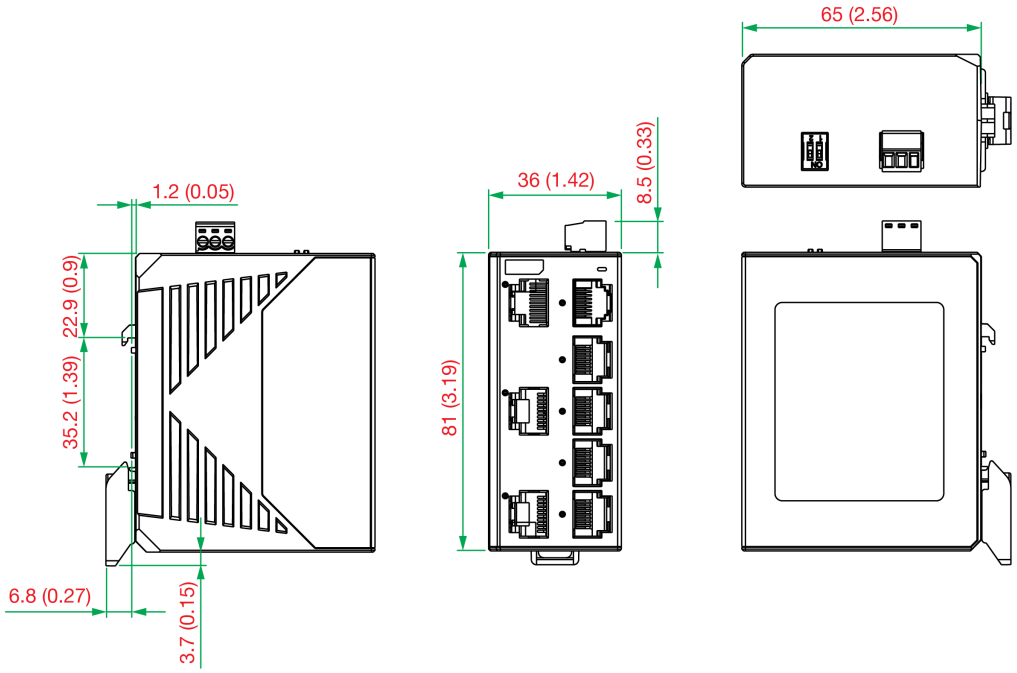
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-2008 Series switch
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	Housing	Operating Temperature
EDS-2008-ELP	8	Plastic	-10 to 60°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-18	Wall-mounting kit, 1 plate, 18 x 120 x 8.5 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2010-ML Series

8+2G-port Gigabit unmanaged Ethernet switches

Features and Benefits

- 2 Gigabit uplinks with flexible interface design for high-bandwidth data aggregation
- QoS supported to process critical data in heavy traffic
- Relay output warning for power failure and port break alarm
- IP30-rated metal housing
- Redundant dual 12/24/48 VDC power inputs
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-2010-ML series of industrial Ethernet switches have eight 10/100M copper ports and two 10/100/1000BaseT(X) or 100/1000BaseSFP combo ports, which are ideal for applications that require high-bandwidth data convergence. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2010-ML Series also allows users to enable or disable the Quality of Service (QoS) function, broadcast storm protection, and the port break alarm function with DIP switches on the outer panel.

The EDS-2010-ML Series has 12/24/48 VDC redundant power inputs, DIN-rail mounting, and high-level EMI/EMC capability. In addition to its compact size, the EDS-2010-ML Series has passed a 100% burn-in test to ensure it will function reliably in the field. The EDS-2010-ML Series has a standard operating temperature range of -10 to 60°C with wide-temperature (-40 to 75°C) models also available.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	8 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	2 Auto negotiation speed Auto MDI/MDI-X connection Full/Half duplex mode
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for flow control IEEE 802.1p for Class of Service
DIP Switch Configuration	
Ethernet Interface	Quality of Service (QoS), Broadcast storm protection, Port break alarm
Switch Properties	
MAC Table Size	8 K
Packet Buffer Size	4 Mbits
Processing Type	Store and Forward

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Current	0.251 A @ 24 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	36 x 135 x 95 mm (1.41 x 5.31 x 3.74 in)
Weight	498 g (1.10 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	EDS-2010-ML-2GTXSFP: -10 to 60°C (14 to 140°F) EDS-2010-ML-2GTXSFP-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1(LVD)
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	2,174,016 hrs
Standards	Telcordia (Bellcore), GB

Warranty

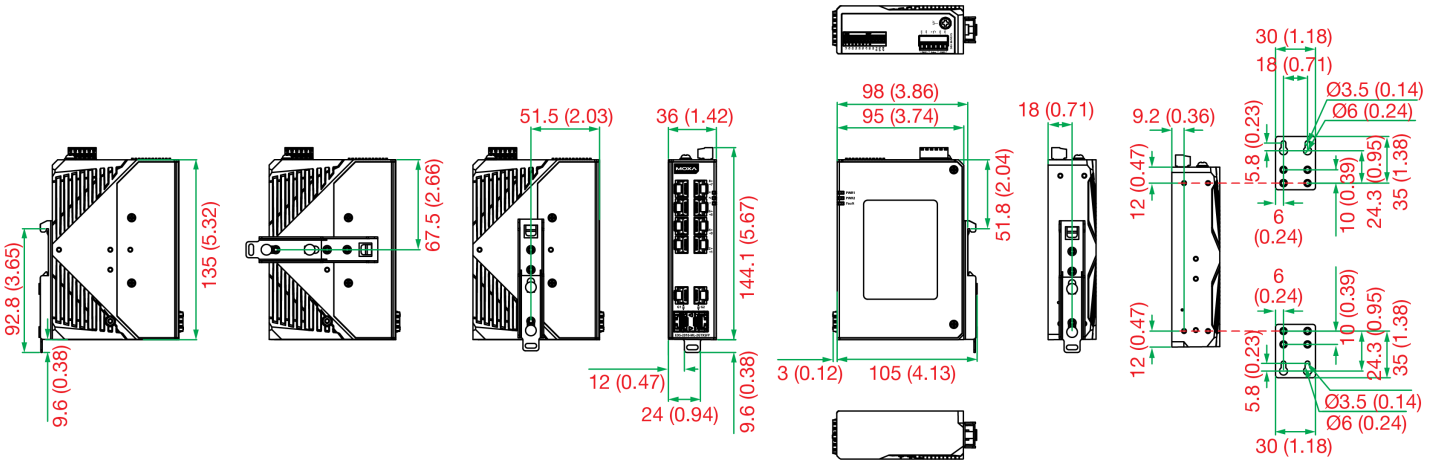
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-2010-ML Series switch
Installation Kit	4 x cap, plastic, for RJ45 port 2 x cap, plastic, for SFP port
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	Operating Temp.
EDS-2010-ML-2GTXSFP	8	2	-10 to 60°C
EDS-2010-ML-2GTXSFP-T	8	2	-40 to 75°C

Accessories (sold separately)

SFP Modules

SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature

SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-30-02	Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2016-ML Series

16-port unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi-mode, SC/ST connectors)[1]
- QoS supported to process critical data in heavy traffic
- Relay output warning for power failure and port break alarm
- IP30-rated metal housing
- Redundant dual 12/24/48 VDC power inputs
- -40 to 75°C operating temperature range (-T model)

Certifications

Introduction

The EDS-2016-ML Series of industrial Ethernet switches have up to 16 10/100M copper ports and two optical fiber ports with SC/ST connector type options (fiber models will be available in the second half of 2020), which are ideal for applications that require flexible industrial Ethernet connections. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2016-ML Series also allows users to enable or disable the Quality of Service (QoS) function, broadcast storm protection, and the port break alarm function with DIP switches on the outer panel.

In addition to its compact size, the EDS-2016-ML Series features 12/24/48 VDC redundant power inputs, DIN-rail mounting, high-level EMI/EMC capability, and an operating temperature range of -10 to 60°C with -40 to 75°C wide temperature models available. The EDS-2016-ML Series has also passed a 100% burn-in test to ensure it will function reliably in the field.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-2016-ML: 16 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control IEEE 802.1p for Class of Service

DIP Switch Configuration

Ethernet Interface	Quality of Service (QoS), Broadcast storm protection, Port break alarm

Input/Output Interface

Alarm Contact Channels	Relay output with current carrying capacity of 1 A @ 24 VDC

Switch Properties

MAC Table Size	8 K
Packet Buffer Size	2 Mbits
Processing Type	Store and Forward

1. Fiber models will be available in the second half of 2020.

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Current	EDS-2016-ML: 0.108 A @ 24 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	EDS-2016-ML: 36 x 135 x 95 mm (1.41 x 5.31 x 3.74 in)
Weight	EDS-2016-ML: 486 g (1.07 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1(LVD)
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	2,070,826 hrs
Standards	Telcordia (Bellcore), GB

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

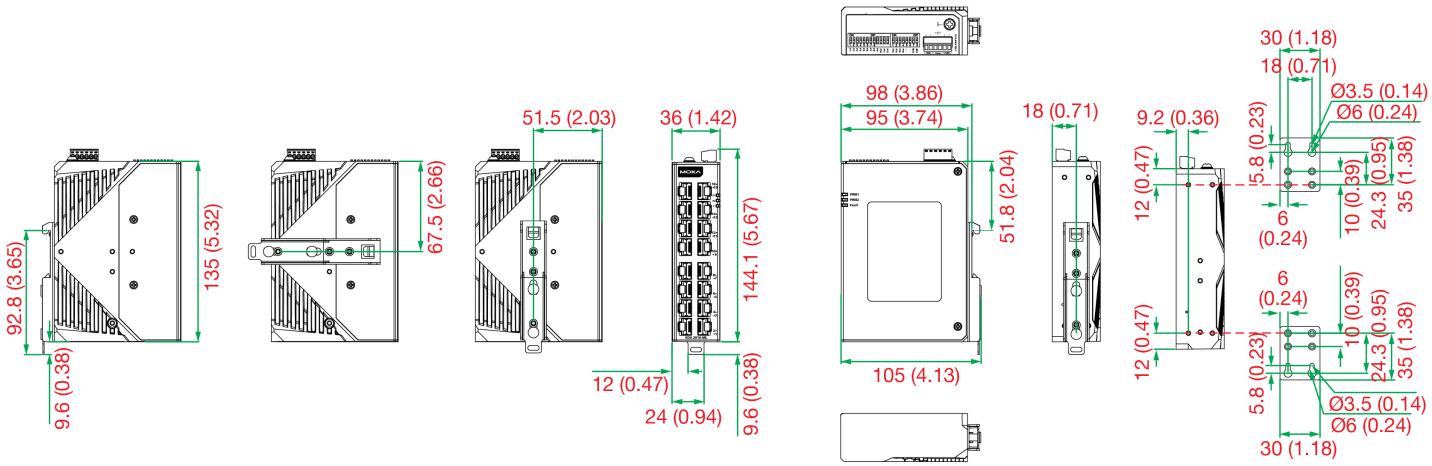
Package Contents

Device	1 x EDS-2016-ML Series switch
Installation Kit	4 x cap, plastic, for RJ45 port
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

EDS-2016–ML Copper Series

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports, RJ45 Connector	100BaseFX Ports Multi-mode, SC Connector	100BaseFX Ports Multi-mode, ST Connector	100BaseFX Ports Single-mode, SC Connector	Operating Temp.
EDS-2016-ML	16	-	-	-	-10 to 60°C
EDS-2016-ML-T	16	-	-	-	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-30-02	Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm Applicable Models: EDS-2016-ML

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-2018-ML Series

16+2G-port Gigabit unmanaged Ethernet switches

Features and Benefits

- 2 Gigabit uplinks with flexible interface design for high-bandwidth data aggregation
- QoS supported to process critical data in heavy traffic
- Relay output warning for power failure and port break alarm
- IP30-rated metal housing
- Redundant dual 12/24/48 VDC power inputs
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-2018-ML series of industrial Ethernet switches have sixteen 10/100M copper ports and two 10/100/1000BaseT(X) or 100/1000BaseSFP combo ports, which are ideal for applications that require high-bandwidth data convergence. Moreover, to provide greater versatility for use with applications from different industries, the EDS-2018-ML Series also allows users to enable or disable the Quality of Service (QoS) function, broadcast storm protection, and port break alarm function with DIP switches on the outer panel.

The EDS-2018-ML Series has 12/24/48 VDC redundant power inputs, DIN-rail mounting, and high-level EMI/EMC capability. In addition to its compact size, the EDS-2018-ML Series has passed a 100% burn-in test to ensure it will function reliably in the field. The EDS-2018-ML Series has a standard operating temperature range of -10 to 60°C with wide-temperature (-40 to 75°C) models also available.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	16 Auto MDI/MDI-X connection Full/Half duplex mode Auto negotiation speed
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	2 Auto negotiation speed Auto MDI/MDI-X connection Full/Half duplex mode
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for flow control IEEE 802.1p for Class of Service
Switch Properties	
MAC Table Size	8 K
Packet Buffer Size	4 Mbits
Processing Type	Store and Forward
DIP Switch Configuration	
Ethernet Interface	Quality of Service (QoS), Broadcast storm protection, Port break alarm

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Current	0.277 A @ 24 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	58 x 135 x 95 mm (2.28 x 5.31 x 3.74 in)
Weight	683 g (1.51 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	EDS-2018-ML-2GTXSFP: -10 to 60°C (14 to 140°F) EDS-2018-ML-2GTXSFP-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 61010-2-201, EN 62368-1(LVD)
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

MTBF

Time	1,776,132 hrs
Standards	Telcordia (Bellcore), GB

Warranty

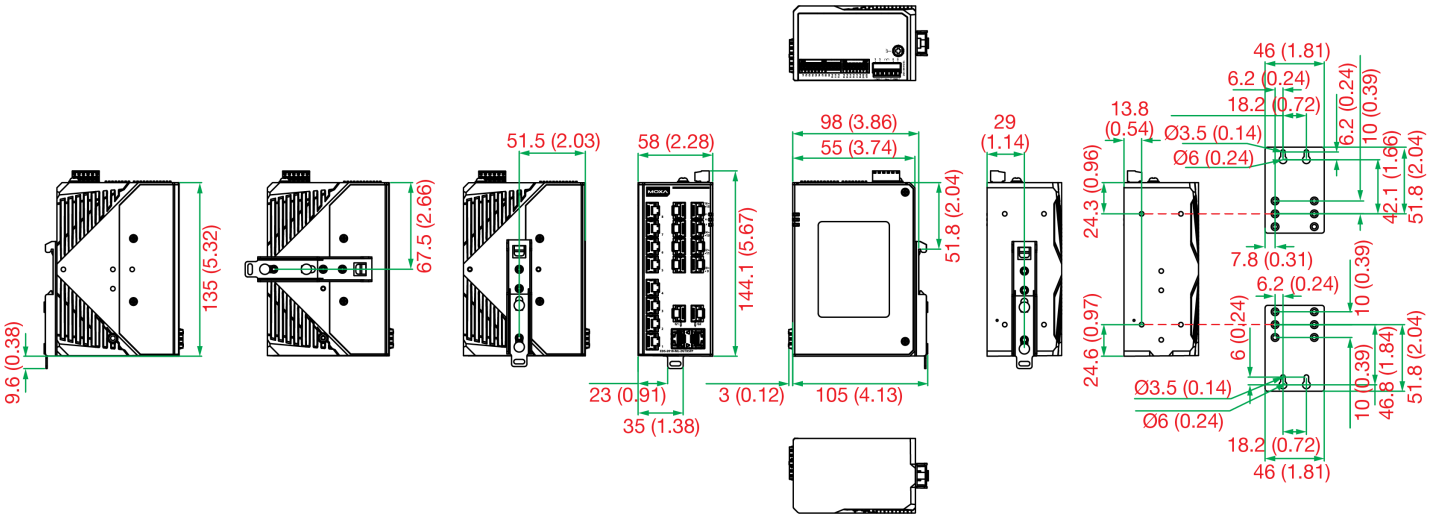
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-2018-ML Series switch
Documentation	1 x quick installation guide 1 x warranty card
Installation Kit	2 x cap, plastic, for SFP port 4 x cap, plastic, for RJ45 port

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100BaseT(X) Ports (RJ45 connector)	Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	Operating Temp.
EDS-2018-ML-2GTXSFP	16	2	-10 to 60°C
EDS-2018-ML-2GTXSFP-T	16	2	-40 to 75°C

Accessories (sold separately)

SFP Modules

SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature

SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46-01	Wall-mounting kit, 2 plates, 8 screws, 46 x 66.8 x 2 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-G205 Series

5G-port full Gigabit unmanaged Ethernet switches

Features and Benefits

- Fiber-optic options for extending distance and improving electrical noise immunity
- Redundant dual 12/24/48 VDC power inputs
- Supports 10 KB jumbo frames
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-G205-1GTXSFP switches are equipped with 5 Gigabit Ethernet ports and 1 fiber-optic port, making them ideal for applications that require high bandwidth. The EDS-G205-1GTXSFP switches provide an economical solution for your industrial Gigabit Ethernet connections, and the built-in relay warning function alerts network managers when power failures or port breaks occur. The 4-pin DIP switches can be used for controlling broadcast protection, jumbo frames, and IEEE 802.3az energy saving. In addition, 100/1000 SFP speed switching is ideal for easy on-site configuration for any industrial automation application.

A standard-temperature model, which has an operating temperature range of -10 to 60°C, and a wide-temperature range model, which has an operating temperature range of -40 to 75°C, are available. Both models undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The switches can be installed easily on a DIN rail or in distribution boxes.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100/1000BaseT(X) Ports (RJ45 connector)	4 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	1
Standards	IEEE 802.3 for 10BaseT IEEE 802.3ab for 1000BaseT(X) IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.3z for 1000BaseX IEEE 802.3az for Energy-Efficient Ethernet
Switch Properties	
MAC Table Size	8 K
Packet Buffer Size	1 Mbits

Jumbo Frame Size	10 KB
Processing Type	Store and Forward

DIP Switch Configuration

Ethernet Interface	Broadcast storm protection, Jumbo Frame, IEEE 802.3az energy saving, 100/1000 SFP speed switching, Port break alarm

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Reverse Polarity Protection	Supported
Input Current	0.14 A @ 24 VDC

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	29 x 135 x 105 mm (1.14 x 5.31 x 4.13 in)
Weight	290 g (0.64 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	EDS-G205-1GTXSFP: -10 to 60°C (14 to 140°F) EDS-G205-1GTXSFP-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX, Class I Division 2
Maritime	ABS, DNV-GL, LR, NK
Railway	EN 50121-4
Safety	EN 60950-1, UL 508, EN 60950-1 (LVD)
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

MTBF

Time	2,823,446 hrs
Standards	Telcordia (Bellcore), GB

Warranty

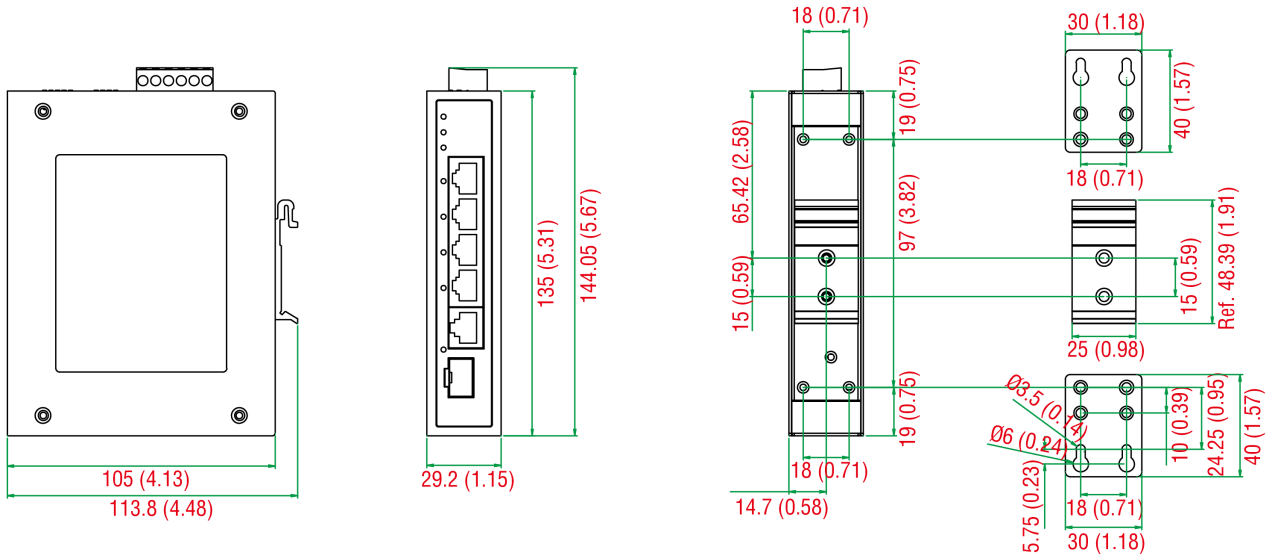
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-G205 Series switch
Installation Kit	1 x cap, plastic, for SFP slot
Documentation	1 x quick installation guide 1 x warranty card
Note	SFP modules need to be purchased separately for use with this product.

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100/1000BaseT(X) Ports RJ45 Connector	Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP	Operating Temp.
EDS-G205-1GTXSFP	4	1	-10 to 60°C
EDS-G205-1GTXSFP-T	4	1	-40 to 75°C

Accessories (sold separately)

SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature

SFP-1FEMLC-T	SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-30	Wall-mounting kit, 2 plates, 4 screws, 40 x 30 x 1 mm
WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-G205A Series

5-port full Gigabit unmanaged Ethernet switches with 4 IEEE 802.3af/at PoE+ ports

Features and Benefits

- Full Gigabit Ethernet ports
- IEEE 802.3af/at, PoE+ standards
- Up to 36 W output per PoE port
- 12/24/48 VDC redundant power inputs
- Supports 9.6 KB jumbo frames
- Intelligent power consumption detection and classification
- Smart PoE overcurrent and short-circuit protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-G205A-4PoE switches are smart, 5-port, unmanaged full Gigabit Ethernet switches supporting Power-over-Ethernet on ports 2 to 5. The switches are classified as power source equipment (PSE), and when used in this way, the EDS-G205A-4PoE switches enable centralization of the power supply, providing up to 36 watts of power per port and reducing the effort needed for installing power.

The switches can be used to power IEEE 802.3af/at standard devices (power devices), eliminating the need for additional wiring, and they support IEEE 802.3/802.3u/802.3x with 10/100/1000M, full/half-duplex, MDI/MDI-X auto-sensing to provide an economical high-bandwidth solution for your industrial Ethernet network.

Specifications

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	EDS-G205A-4PoE Series: 5 EDS-G205A-4PoE-1GSFP Series: 4 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100/1000BaseSFP Ports	EDS-G205A-4PoE-1GSFP Series: 1
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	4
Standards	IEEE 802.3 for 10BaseT IEEE 802.3ab for 1000BaseT(X) IEEE 802.3af/at for PoE/PoE+ output IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control IEEE 802.3z for 1000BaseX
PoE Pinout	V+, V+, V-, V- for pins 1, 2, 3, 6 (Endspan, MDI, Mode A)

Switch Properties

MAC Table Size	8 K
Packet Buffer Size	1 Mbits

Processing Type	Store and Forward
Jumbo Frame Size	10 KB

Power Parameters

Connection	2 removable 2-contact terminal block(s)
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	12 to 57 VDC
Overload Current Protection	Supported
Power Consumption (Max.)	Max. 11.73 W full loading without PDs' consumption
Reverse Polarity Protection	Supported
Input Current	5.65 A @ 24 VDC
Power Budget	62 W (max.) @ 12 VDC for total PD consumption; 36 W (max.) for each PoE port 120 W (max.) @ 24 VDC for total PD consumption; 36 W (max.) for each PoE port 144 W (max.) @ 48 VDC for total PD consumption; 36 W (max.) for each PoE port

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	29 x 135 x 105 mm (1.14 x 5.31 x 4.13 in)
Weight	300 g (0.66 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Safety	UL 508
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

MTBF

Time	1,257,910 hrs
Standards	Telcordia (Bellcore), GB

Warranty

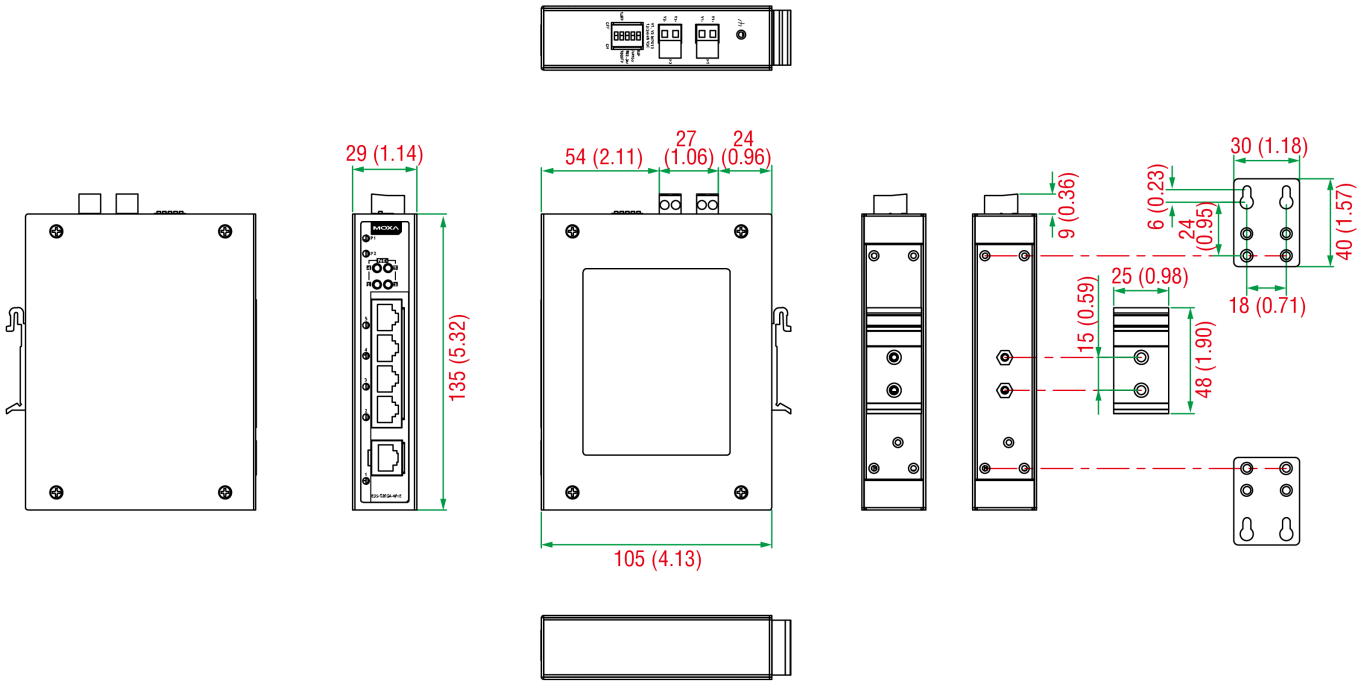
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-G205A Series switch
Documentation	1 x quick installation guide 1 x warranty card
Note	SFP modules need to be purchased separately for use with this product.

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	10/100/1000BaseT(X) Ports RJ45 Connector	100/1000Base SFP Slots	PoE Ports 10/100/1000BaseT(X), RJ45 Connector	Operating Temp.
EDS-G205A-4PoE	5	–	4	0 to 60°C
EDS-G205A-4PoE-T	5	–	4	-40 to 75°C
EDS-G205A-4PoE-1GSFP	4	1	4	0 to 60°C
EDS-G205A-4PoE-1GSFP-T	4	1	4	-40 to 75°C

Accessories (sold separately)

SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature

SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
DR-120-48	120W/2.5A DIN-rail 48 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-75-48	75W/1.6A DIN-rail 48 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
DRP-240-48	DIN-rail 48 VDC power supply with 240W/5A, 85 to 264 VAC, or 120 to 370 VDC input, -10 to 70°C operating temperature

Wall-Mounting Kits

WK-30	Wall-mounting kit, 2 plates, 4 screws, 40 x 30 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-G308 Series

8G-port full Gigabit unmanaged Ethernet switches

Features and Benefits

- Fiber-optic options for extending distance and improving electrical noise immunity
- Redundant dual 12/24/48 VDC power inputs
- Supports 19.6 KB jumbo frames
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-G308 switches are equipped with 8 Gigabit Ethernet ports and 2 fiber-optic ports, making them ideal for applications that demand high bandwidth. The EDS-G308 switches provide an economical solution for your industrial Gigabit Ethernet connections, and the built-in relay warning function alerts network managers when power failures or port breaks occur. The 4-pin DIP switches can be used for controlling broadcast protection, jumbo frames, and IEEE 802.3az energy saving. In addition, 100/1000 SFP speed switching is ideal for easy on-site configuration for any industrial automation application.

A standard-temperature model, which has an operating temperature range of -10 to 60°C, and a wide-temperature range model, which has an operating temperature range of -40 to 75°C, are available. Both models undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The switches can be installed easily on a DIN rail or in distribution boxes.

Specifications

Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 1 A @ 24 VDC
Ethernet Interface	
10/100/1000BaseT(X) Ports (RJ45 connector)	EDS-G308/G308-T: 8 EDS-G308-2SFP/G308-2SFP-T: 6 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	EDS-G308-2SFP: 2 EDS-G308-2SFP-T: 2
Standards	IEEE 802.3 for 10BaseT IEEE 802.3ab for 1000BaseT(X) IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.3z for 1000BaseX IEEE 802.3az for Energy-Efficient Ethernet
DIP Switch Configuration	
Ethernet Interface	Broadcast storm protection, Jumbo Frame, IEEE 802.3az energy saving, 100/1000 SFP speed switching, Port break alarm

Switch Properties

Jumbo Frame Size	9.6 KB
MAC Table Size	8 K
Packet Buffer Size	4 Mbits
Processing Type	Store and Forward

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Voltage	12/24/48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Reverse Polarity Protection	Supported
Input Current	EDS-G308: 0.29 A @ 24 VDC EDS-G308-2SFP: 0.31 A @ 24 VDC

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	53 x 135 x 105 mm (2.08 x 5.31 x 4.13 in)
Weight	880 g (1.94 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX, Class I Division 2
Maritime	ABS, DNV-GL, LR, NK
Railway	EN 50121-4
Safety	EN 60950-1, UL 508, EN 60950-1 (LVD)
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

MTBF

Time	2,424,649 hrs
Standards	Telcordia (Bellcore), GB

Warranty

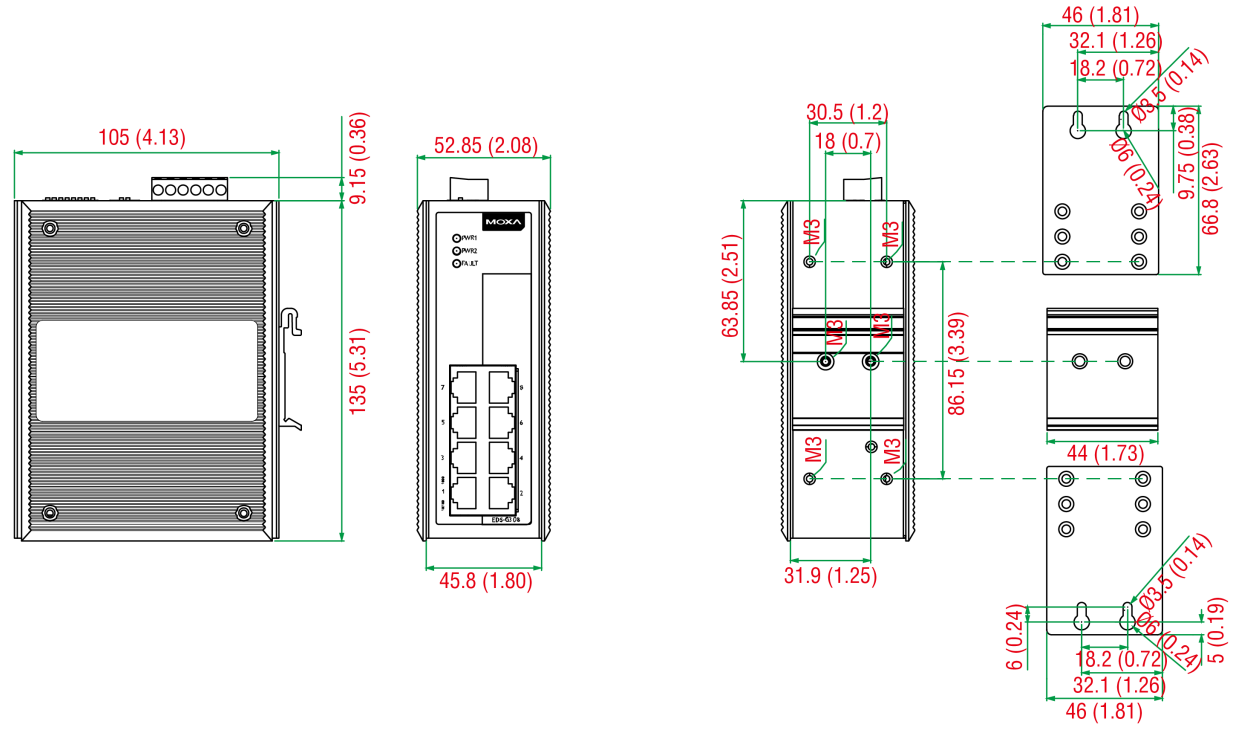
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-G308 Series switch
Installation Kit	4 x cap, plastic, for RJ45 port 2 x cap, plastic, for SFP slot (-2SFP models)
Documentation	1 x quick installation guide 1 x warranty card
Note	SFP modules need to be purchased separately for use with this product.

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

Model Name	10/100/1000BaseT(X) Ports RJ45 Connector	Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP	Operating Temp.
EDS-G308	8	–	-10 to 60°C
EDS-G308-T	8	–	-40 to 75°C

Model Name	10/100/1000BaseT(X) Ports RJ45 Connector	Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP	Operating Temp.
EDS-G308-2SFP	6	2	-10 to 60°C
EDS-G308-2SFP-T	6	2	-40 to 75°C

Accessories (sold separately)

SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature

SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50° C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

EDS-P206A Series

6-port unmanaged Ethernet switches with 4 IEEE 802.3af/at PoE+ ports

Features and Benefits

- IEEE 802.3af/at compliant PoE and Ethernet combo ports
- Up to 30 W output per PoE port
- 12/24/48 VDC redundant power inputs
- Intelligent power consumption detection and classification
- Redundant dual VDC power inputs
- -40 to 75°C operating temperature range (-T models)

Certifications

Introduction

The EDS-P206A-4PoE switches are smart, 6-port, unmanaged Ethernet switches supporting PoE (Power-over-Ethernet) on ports 1 to 4. The switches are classified as power source equipment (PSE), and when used in this way, the EDS-P206A-4PoE switches enable centralization of the power supply and provide up to 30 watts of power per port.

The switches can be used to power IEEE 802.3af/at-compliant powered devices (PD), eliminating the need for additional wiring, and support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDI-X auto-sensing to provide an economical solution for your industrial Ethernet network.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-P206A-4PoE Series: 2 EDS-P206A-4PoE-M-SC/M-ST/S-SC Series: 1 Supported functions: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-P206A-4PoE-M-SC Series: 1 EDS-P206A-4PoE-MM-SC Series: 2
100BaseFX Ports (multi-mode ST connector)	EDS-P206A-4PoE-M-ST Series: 1 EDS-P206A-4PoE-MM-ST Series: 2
100BaseFX Ports (single-mode SC connector)	EDS-P206A-4PoE-S-SC/P206A-4PoE-S-SC-T: 1 EDS-P206A-4PoE-SS-SC/P206A-4PoE-SS-SC-T: 2
PoE Ports (10/100BaseT(X), RJ45 connector)	4
Standards	IEEE 802.3 for 10BaseT IEEE 802.3af/at for PoE/PoE+ output IEEE 802.3x for flow control IEEE 802.3u for 100BaseT(X)

PoE Pinout	V+, V+, V-, V- for pins 1, 2, 3, 6 (Endspan, MDI, Mode A)

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Switch Properties

Packet Buffer Size	768 kbits
MAC Table Size	2 K
Processing Type	Store and Forward

Power Parameters

Input Current	5.55 A @ 24 VDC
Connection	1 removable 4-contact terminal block(s)
Operating Voltage	12 to 57 VDC
Input Voltage	12/24/48 VDC, Redundant dual inputs
Power Budget	Max. 120 W for total PD consumption Max. 30 W for each PoE port
Power Consumption (Max.)	Max. 13.2 W full loading without PDs’ consumption
Reverse Polarity Protection	Supported
Overload Current Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	50.3 x 114 x 70 mm (1.98 x 4.53 x 2.76 in)
Weight	375 g (0.83 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMI	CISPR 32, FCC Part 15B Class A
EMC	EN 55032/24
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	UL 508

MTBF

Time	1,398,743 hrs
Standards	Telcordia (Bellcore), GB

Warranty

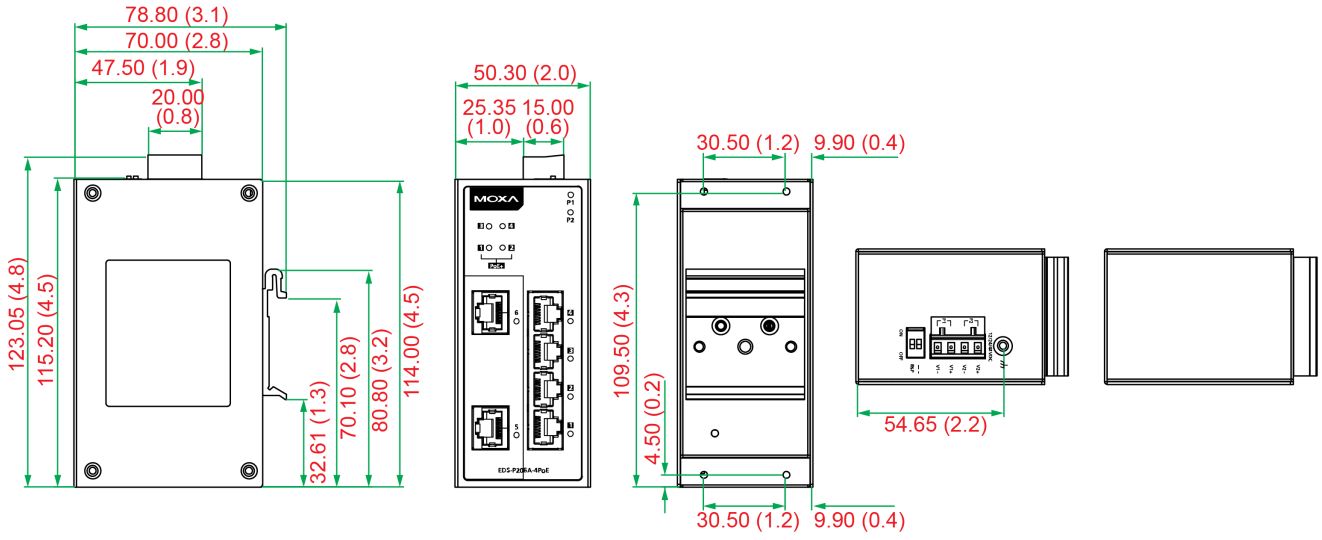
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x EDS-P206A Series switch
Installation Kit	4 x cap, plastic, for RJ45 port
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | Top and Bottom Views

Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	PoE Ports, 10/100BaseT(X) RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-P206A-4PoE	2	4	–	–	–	-10 to 60°C
EDS-P206A-4PoE-T	2	4	–	–	–	-40 to 75°C
EDS-P206A-4PoE-M-SC	1	4	1	–	–	-10 to 60°C
EDS-P206A-4PoE-M-SC-T	1	4	1	–	–	-40 to 75°C
EDS-P206A-4PoE-M-ST	1	4	–	1	–	-10 to 60°C
EDS-P206A-4PoE-M-ST-T	1	4	–	1	–	-40 to 75°C
EDS-P206A-4PoE-MM-SC	–	4	2	–	–	-10 to 60°C
EDS-P206A-4PoE-MM-SC-T	–	4	2	–	–	-40 to 75°C
EDS-P206A-4PoE-MM-ST	–	4	–	2	–	-10 to 60°C
EDS-P206A-4PoE-MM-ST-T	–	4	–	2	–	-40 to 75°C
EDS-P206A-4PoE-S-SC	1	4	–	–	1	-10 to 60°C
EDS-P206A-4PoE-S-SC-T	1	4	–	–	1	-40 to 75°C
EDS-P206A-4PoE-SS-SC	–	4	–	–	2	-10 to 60°C
EDS-P206A-4PoE-SS-SC-T	–	4	–	–	2	-40 to 75°C

Accessories (sold separately)

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
DR-120-48	120W/2.5A DIN-rail 48 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-75-48	75W/1.6A DIN-rail 48 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
DRP-240-48	DIN-rail 48 VDC power supply with 240W/5A, 85 to 264 VAC, or 120 to 370 VDC input, -10 to 70°C operating temperature

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

TN-5305 Series

EN 50155 5-port IP67 unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X), 4-pin M12 (D-coded), F/H duplex mode, and auto MDI/MDI-X connection
- IP67-rated housing protection
- Power input: 12 to 45 VDC, 18 to 30 VAC
- Complies with all EN 50155 mandatory test items[1]
- -40 to 75°C operating temperature range (-T models)

Certifications

EN 50155 EN 50121-4 CE FC

Introduction

The TN-5305 Series Ethernet switches are IP67-rated for tough industrial applications. By using M12 connectors, you can rest assured that Ethernet cables will connect tightly to the switch, and will be robust enough to protect your applications from external disturbances, such as the vibration and shock encountered in the transportation industry.

The space-saving TN-5305 switches can be mounted virtually anywhere, and wide operating temperature (-40 to 75°C) models are also available for use in the most extreme weather conditions. TN-5305 Series Ethernet switches comply with a portion of EN 50155 specifications, covering operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	5
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control

Power Parameters	
Input Current	0.1 A @ 24 VDC, 0.08 A @ 36 VDC
Input Voltage	18 to 30 VAC (47 to 63 Hz), 24 to 36 VDC
Inrush Current (Max.)	0.28 A @ 24 VDC
No. of Power Inputs	1
Operating Voltage	18 to 30 VAC 12 to 45 VDC
Power Connector	M12 A-coded male connector

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Physical Characteristics

Housing	Plastic top cover, metal bottom plate
IP Rating	IP67
Dimensions	60 x 125 x 29.6 mm (2.36 x 4.92 x 1.09 in)
Weight	Packaged: 270 g (0.56 lb)
Installation	DIN-rail mounting (with optional kit), Wall mounting

Environmental Limits

Operating Temperature	TN-5305: -25 to 60°C (-13 to 140°F) TN-5305-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Altitude	2000 m

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, EN 50155 IEC 60068-2-14, EN 50155 IEC 60068-2-2, EN 50155 IEC 60068-2-30, EN 50155
International Approval	RCM
Railway	EN 50121-4, EN 50155
Railway Fire Protection	EN 45545-2
Safety	EN 60950-1, UL 508
Salt Spray Test	IEC 60068-2-11, EN 50155
Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	3,451,678 hrs
Standards	Telcordia SR332

Warranty

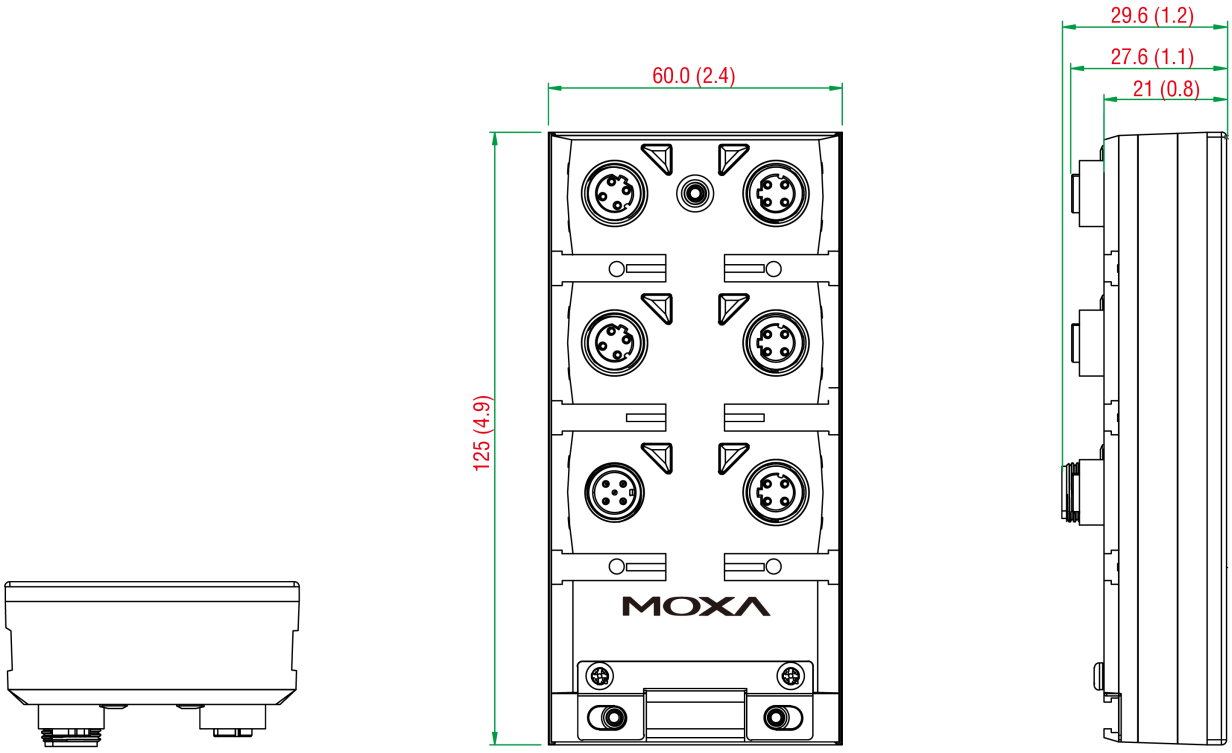
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x TN-5305 Series switch
Installation Kit	1 x panel-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Top View

Front View

Side View

Ordering Information

Model Name	PoE, 10/100BaseT(X) Ports, M12 D-Coded Female Connector	10/100BaseT(X) Ports, M12 D-Coded Female Connector	Power Input	Input Voltage	Operating Temp.
TN-5305	–	5	Single input	24/36 VDC, 18 to 30 VAC	-25 to 60°C
TN-5305-T	–	5	Single input	24/36 VDC, 18 to 30 VAC	-40 to 75°C

Accessories (sold separately)

Cables

CBL-M12(FF5P)/Open-100 IP67	A-coded M12-to-5-pin power cable, IP67-rated 5-pin female M12 connector, 1 m

CBL-M12D(MM4P)/RJ45-100 IP67	M12-to-RJ45 cable, IP67-rated, 1 m

M12 Connector Caps

A-CAP-M12F-M	Metal cap for M12 female connector
A-CAP-M12M-M	Metal cap for M12 male connector

Connectors

M12D-4PMM-IP67	M12 D-coded connector, QUICKON type, 4-pin male, IP67
M12D-4P-IP68	M12 D-coded screw-in sensor connector, male, IP68

DIN-Rail Mounting Kits

DK-M12-305	DIN-rail mounting kit for EDS-305-M12

TN-5308 Series

EN 50155 8-port unmanaged Ethernet switches

Features and Benefits

- M12 connectors and IP40 metal housing
- Up to 8 IEEE 802.3af compliant PoE and Ethernet combo ports
- Supports IEEE 802.3/802.3u/802.3x
- Complies with all EN 50155 mandatory test items[1]
- -40 to 75°C operating temperature range (-T models)

Certifications

EN 50155 EN 50121-4 CE FC

Introduction

The ToughNet TN-5308 Series M12 unmanaged Ethernet switches are designed for industrial applications in harsh environments. TN-5308 Series switches use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. The TN-5308 Series Ethernet switches provide 8 Fast Ethernet M12 ports, support IEEE 802.3/802.3u/802/3x with 10/100M, full/half-duplex, MDI/MDI-X auto-sensing, and provide an economical solution for your industrial Ethernet network.

Models with an extended operating temperature range of -40 to 75°C are also available. TN-5308 Ethernet switches comply with those EN 50155 requirements that make products more suitable for rolling stock applications, including operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications. TN-5308 PoE Ethernet switches provide 4 or 8 IEEE 802.3af compliant PoE ports. These switches are classified as power source equipment (PSE) and provide up to 15.4 watts of power per port.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	TN-5308 Series non-PoE models: 8
PoE Ports (10/100BaseT(X), M12 D-coded 4-pin female connector)	TN-5308-4PoE Series: 4 TN-5308-8PoE Series: 8
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control TN-5308 Series PoE models: IEEE 802.3af for PoE
Power Parameters	
Input Current	TN-5308-LV Series: 0.19 A @ 12 VDC, 0.10 A @ 24 VDC, 0.05 A @ 48 VDC TN-5308-MV Series: 0.033 A @ 72 VDC, 0.024 A @ 96 VDC, 0.021 A @ 110 VDC TN-5308-4PoE Series: 1.6 A @ 48 VDC TN-5308-8PoE Series: 2.9 A @ 48 VDC
Input Voltage	TN-5308-LV Series: 12 to 48 VDC TN-5308-MV Series: 72 to 110 VDC PoE models: 48 VDC
Max. PoE Power Output per Port	TN-5308 Series PoE models: 15.4 W
No. of Power Inputs	1

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Operating Voltage	TN-5308-LV Series: 8.4 to 60 VDC TN-5308-MV Series: 50.4 to 137.5 VDC TN-5308 Series PoE models: 46 to 50 VDC
Power Connector	TN-5308-LV Series and TN-5308 Series PoE models: M12 A-coded male connector TN-5308-MV Series: M23 connector

Physical Characteristics

Housing	Metal
IP Rating	IP40
Dimensions	TN-5308-LV Series: 60 x 216.6 x 36.1 mm (2.36 x 8.53 x 1.42 in) TN-5308-MV Series: 60 x 216.6 x 53.8 mm (2.36 x 8.53 x 2.12 in) TN-5308-4PoE Series: 60 x 216.6 x 48.7 mm (2.36 x 8.53 x 1.91 in) TN-5308-8PoE Series: 60 x 216.6 x 52.9 mm (2.36 x 8.53 x 2.1 in)
Weight	TN-5308-LV Series: 485 g (1.07 lb) TN-5308-MV Series: 685 g (1.51 lb) TN-5308-4PoE Series: 675 g (1.49 lb) TN-5308-8PoE Series: 970 g (2.14 lb)
Installation	DIN-rail mounting (with optional kit), Wall mounting
Protection	TN-5308 Series -CT models: PCB conformal coating

Environmental Limits

Operating Temperature	Standard Models: -25 to 60°C (-13 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Altitude	2000 m

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, EN 50155 IEC 60068-2-14, EN 50155 IEC 60068-2-2, EN 50155 IEC 60068-2-30, EN 50155
International Approval	RCM
Railway	EN 50121-4, EN 50155
Railway Fire Protection	EN 45545-2
Safety	EN 60950-1, UL 508
Salt Spray Test	IEC 60068-2-11, EN 50155

Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	TN-5308-LV Series: 2,099,286 hrs TN-5308-MV Series: 2,590,858 hrs TN-5308-4PoE Series: 252,075 hrs TN-5308-8PoE Series: 308,392 hrs
Standards	Telcordia SR332

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

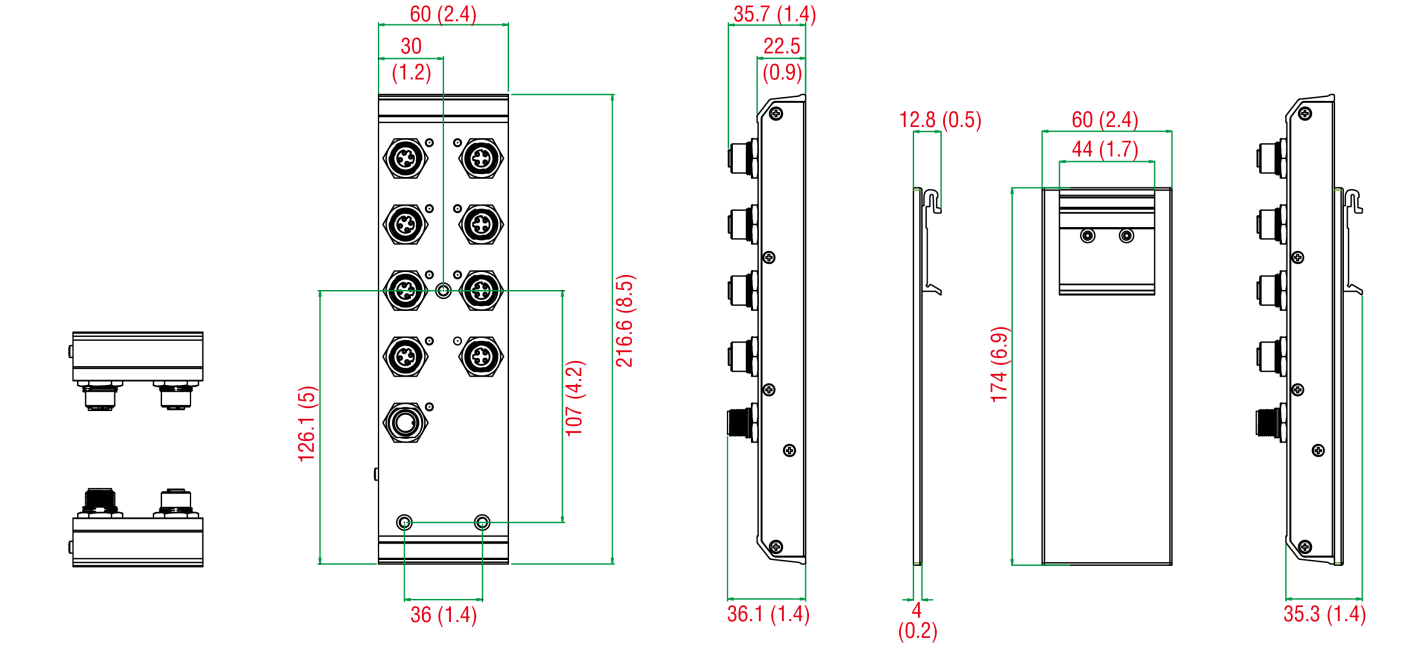
Package Contents

Device	1 x TN-5308 Series switch
Installation Kit	1 x panel-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

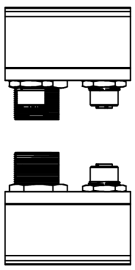
TN-5308-LV Series

Unit: mm (inch)

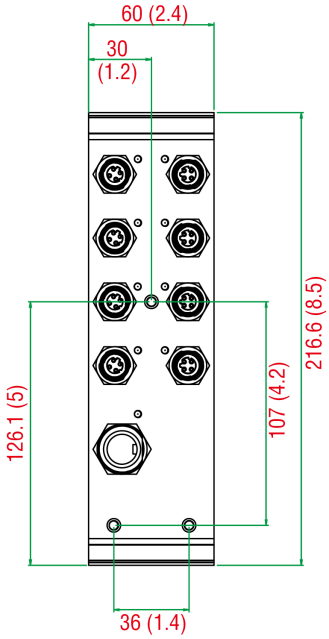


Top and Bottom Views | Front View | Side View | DIN-Rail Mounting Kit | Side View (including DIN-Rail)

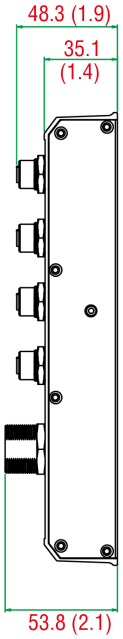
Unit: mm (inch)



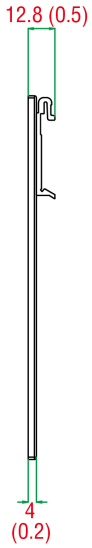
Top and Bottom Views

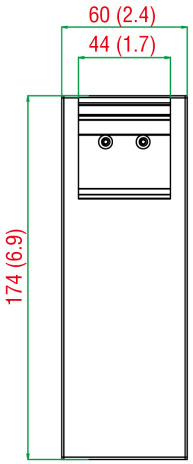


Front View

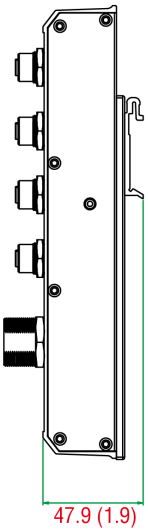


Side View





DIN-Rail Mounting Kit



Side View
(including DIN-Rail)

Ordering Information

Model Name	PoE, 10/100BaseT(X) Ports, M12 D-Coded Female Connector	10/100BaseT(X) Ports, M12 D-Coded Female Connector	Power Input	Input Voltage	Operating Temp.	Conformal Coating
TN-5308-LV	–	8	Single input	12/24/36/48 VDC	-25 to 60°C	–
TN-5308-LV-CT	–	8	Single input	12/24/36/48 VDC	-25 to 60°C	✓
TN-5308-LV-T	–	8	Single input	12/24/36/48 VDC	-40 to 75°C	–
TN-5308-LV-CT-T	–	8	Single input	12/24/36/48 VDC	-40 to 75°C	✓
TN-5308-MV	–	8	Single input	72/96/110 VDC	-25 to 60°C	–
TN-5308-MV-CT	–	8	Single input	72/96/110 VDC	-25 to 60°C	✓
TN-5308-MV-T	–	8	Single input	72/96/110 VDC	-40 to 75°C	–
TN-5308-MV-CT-T	–	8	Single input	72/96/110 VDC	-40 to 75°C	✓
TN-5308-4PoE-48	4	4	Single input	48 VDC	-25 to 60°C	–
TN-5308-4PoE-48-CT	4	4	Single input	48 VDC	-25 to 60°C	✓
TN-5308-4PoE-48-T	4	4	Single input	48 VDC	-40 to 75°C	–
TN-5308-4PoE-48-CT-T	4	4	Single input	48 VDC	-40 to 75°C	✓
TN-5308-8PoE-48	8	–	Single input	48 VDC	-25 to 60°C	–
TN-5308-8PoE-48-CT	8	–	Single input	48 VDC	-25 to 60°C	✓
TN-5308-8PoE-48-T	8	–	Single input	48 VDC	-40 to 75°C	–
TN-5308-8PoE-48-CT-T	8	–	Single input	48 VDC	-40 to 75°C	✓

Accessories (sold separately)

Cables

CBL-M12(FF5P)/Open-100 IP67	A-coded M12-to-5-pin power cable, IP67-rated 5-pin female M12 connector, 1 m Applicable Models: TN-5308-LV TN-5308-LV-T TN-5308-LV-CT-T TN-5308-MV-CT-T TN-5308-4PoE-48 TN-5308-4PoE-48-T TN-5308-8PoE-48 TN-5308-8PoE-48-T
CBL-M12D(MM4P)/RJ45-100 IP67	M12-to-RJ45 cable, IP67-rated, 1 m
CBL-M23(FF6P)/OPEN-BK-100 IP67	M23 to 6-pin power cable, IP67-rated female 6-pin M23 connector, IP67, 1 m Applicable Models: TN-5308-MV TN-5308-MV-T
CBL-M12DMM4PM12DMM4P-BK-100-IP67	M12-to-M12 Cat-5E STP Ethernet cable, 4-pin D-coded M12 connector, IP67, 1 m

M12 Connector Caps

A-CAP-M12F-M	Metal cap for M12 female connector
A-CAP-M12M-M	Metal cap for M12 male connector

Connectors

M12D-4PMM-IP67	M12 D-coded connector, QUICKON type, 4-pin male, IP67
M12D-4P-IP68	M12 D-coded screw-in sensor connector, male, IP68
A-PLG-WPM23-01-IP67	M23 cable connector, female 6-pin, crimp type, IP67 Applicable Models: TN-5308-MV TN-5308-MV-T

DIN-Rail Mounting Kits

DK-TN-5308	DIN-rail mounting kit for the TN-5308 Series